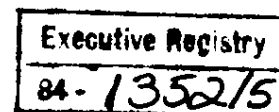


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NATIONAL SECURITY COUNCIL
WASHINGTON, D.C. 20506

July 17, 1984



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MEMORANDUM FOR

MR. CHARLES HILL
Executive Secretary
Department of State

Executive Secretary
Central Intelligence Agency

STAT

MR. CHRISTOPHER HICKS
Executive Secretary
Department of the Treasury

MR. JOHN A. SVAHN
Assistant to the President for
Policy Development

COLONEL R. J. AFFOURTIT
Executive Secretary
Department of Defense

MR. WILLIAM NISKANEN
Member, President's Council
of Economic Advisors

MR. STEPHEN GLEASON
Executive Assistant to
the Secretary
Department of the Interior

BRIG. GENERAL GEORGE A. JOULWAN
Executive Assistant to the
Chairman
Joint Chiefs of Staff

MRS. HELEN ROBBINS
Executive Assistant to
the Secretary
Department of Commerce

MR. RAY KLINE
Acting Administrator
General Services Administration

MR. WILLIAM VITALE
Executive Secretary
Department of Energy

MR. LOUIS O. GIUFFRIDA
Director, Federal Emergency
Management Agency

MR. ALTON KEEL
Associate Director for
National Security and
International Affairs
Office of Management and
Budget

MR. CHARLES SIEGMAN
Associate Director
Federal Reserve Board

MR. FRED J. VILLELLA
Secretariat, Emergency
Management Preparedness Board

SUBJECT: National Defense Stockpile Goals Review

Attached is a copy of the draft Input/Output report of the Macroeconomic Working Group for review and comment by your agency/department. Please circulate it to concerned officials within your agency/department and provide one set of comments on the report under the signature of an Assistant Secretary-level official to the NSC Executive Secretariat by Tuesday, July 24.

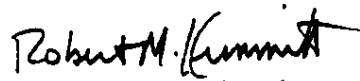
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The Steering Group will hold a meeting at 3:00 p.m. on Friday, July 27, in Room 208 of the Old Executive Office Building. Please provide the name of your agency/department representative to Cathy Connolly on 395-7350 by 4:00 p.m. Thursday, July 26, so that we can arrange clearance into the building.


Robert M. Kimmitt
Executive Secretary

Attachment
TAB A Input/Output Report

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INPUT/OUTPUT REPORT EXECUTIVE SUMMARY

Background

The Steering Group on March 27, 1984, recommended adoption of a simulated GNP path for the 1983 through 1986 period assuming a three-year war as described in EMPB Scenario 3A (adjusted for a one-year warning period). The major factors affecting the achievable likely GNP level during the war were real defense expenditures, as provided by the Secretary of Defense; fiscal policies to finance the war; and reduced imports (and higher real prices) of petroleum. The composition of GNP was also affected by assumptions reducing automobile production and new housing construction. (S)

GNP Assumptions Adopted by the Steering Group (S)

(Billions of 1972\$)

	Prewar		War Period		
	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Gross National Product	\$1485	\$1510	\$1592	\$1683	\$1744
Personal Consumption Expenditures	970	958	940	966	1019
Gross Private Domestic Investment	195	210	208	214	198
Net Exports	29	9	12	11	12
Government Purchases	292	334	432	492	515
Federal					
Defense	81	131	246	309	338
Other	36	27	22	21	20
State and Local	175	176	165	162	157

Objective

The major objective of the Macroeconomic Working Group at this stage was to transform the simulated GNP adopted by the Steering Group into estimates of industrial gross outputs and to partition the economy into tiers. These gross output estimates will be used by the Materials Consumption Working Group to calculate strategic materials demands for stockpile planning. (U)

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Procedure

This task encompasses two steps. First, the economy was divided into four tiers consistent with the Strategic and Critical Materials Stock Piling Act requirements: Defense, Industrial, Essential Civilian, and Nonessential Civilian. Materials requirements of the first three tiers will be guaranteed by wartime production, imports from reliable sources or the government stockpiles. Second, detailed investment requirements to meet defense and essential civilian wartime needs were estimated because the unusual composition of wartime investment requirements placed on the economy during a major war were not captured in the macroeconomic simulation of investment nor was sufficient detail provided. (U)

-- Division into Tiers

- o Defense Tier: Direct and indirect production necessary to provide the final demand requirements specified by the Department of Defense. (U)
- o Industrial: Direct and indirect production for investment to maintain and expand the industrial base to produce the necessary defense output and to maintain the industrial base for essential civilian and industrial output. (U)
- o Essential Civilian: Direct and indirect production which is necessary to meet the basic needs of the civilian economy for food, clothing, shelter, transportation, medical and other services. This includes only needs which, if not met, would prevent the government from attaining its national security objectives. (U)
- o Nonessential Civilian: Production that is not essential to meet our national security objectives. This includes such civilian luxuries as jewelry, private aircraft, and new cars. Although the Federal Government would not ensure materials availability for such activity, the private market could make materials available where it is economical to do so. (U)

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ALLOCATION OF GNP AMONG TIERS
(Percent of Simulated GNP) (U)

	<u>1984</u>	<u>1985</u>	<u>1986</u>
Defense	15.4%	18.4%	19.4%
Industrial	3.8	3.6	3.0
Essential Civilian	68.4	65.2	65.3
Nonessential Civilian	12.4	12.8	12.3

-- Estimation of Investment Requirements

Investment requirements were calculated separately for five industrial categories: (U)

- o Investment to expand and maintain capacity for industries that produce at much higher levels than before the war. These industries are generally manufacturing industries that meet defense needs. Investment in these industries averaged \$18B per year. (U)
- o Investment in the energy industries. These industries are projected to expand in response to petroleum shortages caused by reduced imports. Investment estimates were based on historical patterns for these industries and average \$17B per year. (U)
- o Investment to product critical and strategic minerals. These investments, based on estimates by the Bureau of Mines, average \$3.2B per year. (U)
- o Investment to maintain capacity in other industries. No other essential industries required capacity expansions. Investment of \$20B per year was included to offset the effect of depreciation on capacity limits for those industries not covered in the first three categories. (U)
- o Investment in residential construction averages \$25B per year, about 60 percent of prewar investment levels. Relatively low housing density rates and high vacancy rates suggest the existing housing stock is generally adequate. (U)

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Results

Two models were used to estimate the wartime output requirements of each industry. The Defense Tier was processed through the Defense Economic Impact Model System (DEIMS) by the Economic Analysis Division in the Office of the Secretary of Defense. The Industrial, Essential Civilian, and Nonessential Tiers were processed through FEMA's input-output model. Industrial output is larger than total GNP final demand because it includes all intermediate demands as well as final demands. The results by tier are: (U)

GROSS OUTPUT BY TIER
(Billions of 1972\$) (U)

	<u>1984</u>	<u>1985</u>	<u>1986</u>
Defense	\$ 377	\$ 502	\$ 570
Industrial	121	122	108
Essential Civilian	<u>1762</u>	<u>1771</u>	<u>1851</u>
Total Essential Output	\$2260	\$2395	\$2529
Nonessential Civilian	<u>397</u>	<u>439</u>	<u>431</u>
Total Output	\$2657	\$2834	\$2960

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METHODOLOGICAL OVERVIEW

The Macro Working Group translated the GNP final demands from the Wharton long-term macro model simulation into gross output by detailed industries. These outputs are to be used by the Materials Consumption Working Group to determine U.S. materials demands. (U)

Estimation of industrial outputs involved three steps: (1) The economy was divided into tiers that basically reflect the importance of the output to the economy and the war effort and that correspond to the Strategic and Critical Materials Stock Piling Act. (2) The GNP final demands generated by the Wharton model were allocated to the tiers. An investment path that would ensure sufficient industrial capacity to produce all essential output was developed and was used as a component of GNP final demand. (3) The final demands for the essential tiers were run through Input-Output tables to estimate the levels of gross output for 257 industries. All GNP final demands and industry outputs are expressed in 1972 dollars. (U)

Step I: Definition of the Tiers

The economy was divided into four tiers: Defense, Industrial, Essential Civilian, and Nonessential Civilian. The Defense Tier includes all direct and indirect production necessary to satisfy defense final demands. The Industrial Tier includes investment necessary to maintain and expand the industrial base for producing Defense, Essential Civilian, and Industrial output. The Essential Civilian Tier consists of goods and services deemed necessary to meet the basic needs of the civilian economy. The Nonessential Civilian Tier includes all other final demands. The three essential tiers, on average, comprise 88 percent of real GNP projected in the econometric simulations approved by the Steering Group. (U)

Step II: Allocation of Final Demands to the Tiers

The Wharton model estimated GNP for four final demand categories: personal consumption, gross private domestic investment, net exports, and government purchases of goods and services. The model produces detailed components for each of these categories, which were allocated among the tiers. (U)

Wharton's investment projection was inadequate for stockpile planning, so the investment component of final demand had to be reallocated. The Wharton model shows business fixed investment at an aggregate level and does not relate investment to defense, essential civilian, and industrial needs. The model projects investment based on historical patterns which underestimate the investment necessary to produce defense systems and are inappropriate for this scenario, although the aggregate

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investment is more than sufficient. Therefore, the required investment was estimated in a supplemental analysis. This exercise is iterative with Step III because investment is itself a component of final demand. (U)

The analysis compared estimates of gross output by industry with previous peak-year output levels. Investment sufficient to expand capacity was estimated for those industries in which projected output exceeded previous peak outputs. Investments in energy and minerals industries were evaluated separately because historical capacity analyses are inappropriate. (U)

Step III: Estimation of Industrial Output

The projections of gross output by industry were made with a translator and an Input-Output (I-O) model. I-O analysis entails two basic steps: (U)

- o Translating GNP into a detailed "bill of goods" of final outputs of producing industries. (U)
- o Utilizing an input-output model (a coefficient matrix which reflects historical technological relationships between output of various industries) to calculate the industry outputs required to produce the detailed "bill of goods". These industry outputs consist of both direct requirements (e.g., the steel that goes into tanks) and indirect requirements (e.g., the coal that is used to make steel). (U)

Two translators and associated Input-Output models were used to estimate industry gross output: DOD's Defense Economic Impact Modeling System (DEIMS) to translate the wartime scenario Defense purchases provided by the Secretary of Defense into direct and indirect industry outputs, and FEMA's Demand Impact Transformation Table (DITT) to translate nondefense final demands into direct and indirect industry outputs. DEIMS provides details for 400 industries, whereas FEMA provides details for 257. DEIMS's output estimates were aggregated to conform to FEMA's I-O model industry specifications. (U)

The initial step in the I-O study used DEIMS to translate the defense purchases by budget category (Defense Tier) into industry outputs. DEIMS was developed in the Office of the Secretary of Defense to estimate the effects of defense spending on the U. S. economy. It was judged the most appropriate model for translating the defense purchases into industry output because of the relatively great and current detail it provides for defense demands. In addition to direct defense outlays, DEIMS estimates specific levels of investment for various components of the defense buildup. The I-O table in DEIMS translates these defense and investment purchases into industry output requirements. (U)

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In the next step, all other essential final demands were run through the DITT translator and FEMA's I-O. The FEMA models were suitable because they are calibrated to the materials consumption coefficients adopted in another task of this study. Final demands associated with the Nonessential Civilian Tier were processed through FEMA's I-O model to estimate total U.S. wartime materials requirements. However, materials needed for the Nonessential Civilian Tier will not be assured by government stockpiles or other government policies but will have to be obtained from other sources or be reduced by substitution or conservation. (U)

Finally, the Defense Tier output estimates derived from DEIMS were added to the Industrial, Essential Civilian, and Nonessential Civilian Tier outputs estimated by the FEMA model to derive total output estimates for each of the 257 industries. The supply/demand balance study requires estimates of both total U.S. materials demands as well as the demands of the Defense, Industrial, and Essential Civilian Tiers which the government will assure supplies to meet. (U)

Input-Output analysis tends to overestimate the use of factors of production that become relatively more scarce during the course of the scenario. This overestimation occurs because I-O tables reflect production processes and technologies that are assumed to be fixed. As a result, the methodology does not reflect any economizing on the use of scarce resources that may occur due to changes in relative prices. (U)

This inherent bias of input-output analysis could be of some significance when investment requirements are estimated for various sectors of the economy. Investment requirements are calculated on the basis of projected industry outputs and necessary capital stocks. The projected industry outputs, however, do not account for any substitution away from the outputs of those industries that are capacity constrained and which may therefore be expected to raise their prices relative to the prices in the rest of the economy. For industries in which the output is used solely for defense needs, such substitutions are assumed to be zero. However, for industries that produce other intermediate or final goods the calculations of output and therefore of investment requirements are likely to be overestimated. (By a similar argument the projections of materials consumption, to be detailed in another part of this study, will also be overestimated.) (U)

The rest of the paper is organized in the following manner: Section I defines the four tiers of the economy. Section II allocates the GNP among the designated tiers and explains the process by which investment levels were estimated. Section III presents output by year for the 257 industrial sectors and discusses the results. (U)

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I. DEFINITION OF TIERS

Under the Strategic and Critical Materials Stock Piling Act, the stockpile must ensure supplies of materials adequate to provide for the military, industrial, and essential civilian needs of the United States. Stockpile planning has reflected this requirement by partitioning the economy into four "tiers". These tiers are used in subsequent steps to determine stockpile priorities and acceptable levels of risk. The working group recommends a continuation of this 4-way classification, with macroeconomic activity partitioned according to the following definitions: (U)

Defense: All direct and indirect production necessary to provide the final demand requirements specified by the Department of Defense. (U)

Industrial: Direct and indirect production for investment to maintain and expand the industrial base to produce the necessary defense output and to maintain the industrial base for essential civilian and industrial output. (U)

Essential Civilian: Direct and indirect production which is necessary to meet the basic needs of the civilian economy for food, clothing, shelter, transportation, medical and other services. This includes only needs which, if not met, would prevent the government from attaining its national security objectives. (U)

Nonessential Civilian: Final demand that is not essential to meet our national security objectives. This includes such civilian luxuries as jewelry, private aircraft, and new cars. The Federal Government would not ensure materials availability for such items. However, the private market could make materials available where it is economical to do so. (U)

The first three tiers, a subset of the economic projections derived in the earlier simulations, contain production the government deems essential. The working group recommends that materials be provided for this production either from secure domestic sources, sufficiently reliable imports, or, where necessary, government stockpiles. The fourth tier represents economic output which, in view of the wartime emergency, expected consumer austerity, and the vast stock of consumer durables and capital goods, is not necessary for the government to attain its national security objectives. (U)

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Under this approach, the government would assume no responsibility for providing materials for the Nonessential Civilian tier. Production can still take place within this tier with materials provided by private sources to the extent determined by market forces through private inventories and stockpiles, substitution away from critical materials, conservation, enhanced recycling, or expanded production levels by private programs over and above those envisioned for government-sponsored programs. Through these means, some or all of the production in this tier will be facilitated, with the exact amount determined by market forces rather than government planning. (U)

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II. ALLOCATION OF FINAL DEMANDS TO THE TIERS

Final demands were allocated to the four tiers during 1984-86 for the purpose of estimating materials demands and stockpiling requirements. In some cases the following tables also show data for analytical purposes for 1983 and earlier years.

Part 1 -- The Defense Tier

Federal defense purchases of goods and services in the Wharton long-term macro model simulation increased from 5 percent of GNP in 1982, the year before the mobilization, to 19 percent of GNP by 1986. Defense purchases, based on figures supplied by the Secretary of Defense, to support the war effort accounted for most of this total. Defense purchases as a percent of total Federal purchases increased from 69 percent in 1982 to 95 percent by 1986. All Defense purchases, and only Defense purchases, were allocated to the Defense Tier. (S)

Defense purchases, as provided by the Secretary, were processed through the Defense Economic Impact Model System (DEIMS) by the Economic Analysis Division in the Office of the Secretary of Defense. DEIMS translated the approved purchases from each of 50 Defense budget accounts to the direct and indirect industry outputs of 400 industries. As indicated earlier, the 400 industries were aggregated to the same 257 industries used by FEMA for the civilian economy. (U)

Federal Defense Purchases (S)
(Billions of 1972\$)

<u>1982</u>	<u>1983</u>	-- War Years --		
		<u>1984</u>	<u>1985</u>	<u>1986</u>
\$81	\$131	\$246	\$309	\$338

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DEIMS "unbundles" outlays on a number of major weapons systems into purchases from several industries. These unbundled purchases are treated as final demands. They improve the estimation of industry output because they more accurately reflect the input requirements for major weapons systems. (U)

DEIMS also estimates some of the capital outlays needed to produce major weapons systems as part of the Defense Tier. These investment outlays are based on historical patterns and do not necessarily reflect total investment needs for defense purposes during a mobilization and war. The additional investment to insure adequate industrial capacity to meet Defense needs is contained in the Industrial Tier. (U)

The capital outlays estimated by DEIMS take two forms: (1) capital that is paid for directly as part of the totally funded nonrecurring costs for new starts, which includes specialized machinery and equipment, jigs, fixtures, and special tooling; and (2) capital costs which are prorated as part of the firm's overhead. Approximately 10 percent of overhead budgets on major procurement accounts are estimated to be capital investment, and overheads are estimated to be 100 to 200 percent of direct labor and materials costs. These estimates imply that about 2-3 percent of outlays on most major new systems go for investment (apart from the totally funded nonrecurring costs for new starts). (U)

DEFENSE TIER
Investment Summary (U)
(Billions of 1972\$)

	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Operations & Maintenance	\$0.02	\$0.02	\$0.03	\$0.03
Aircraft	0.38	0.93	1.52	1.83
Missiles	0.08	0.19	0.19	0.18
Weapons & Tracked Vehicles	0.11	0.41	0.50	0.50
Ships & Conversions	0.19	0.34	0.42	0.47
Ammunition	0.58	2.10	3.42	4.07
Other Procurement	0.06	0.12	0.16	0.18
RDT&E	<u>0.06</u>	<u>0.07</u>	<u>0.08</u>	<u>0.09</u>
Total	\$1.48	\$4.18	\$6.32	\$7.35

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Part 2 -- The Industrial Tier

The Industrial Tier consists of investment required to support production in the Defense, Essential Civilian, and Industrial Tiers. Gross private domestic investment projected by the Wharton model averages \$207B per year during the war (1984-1986). The investment patterns and levels reflect peacetime patterns that may not guarantee sufficient capacity for industries producing essential output. The \$207B average annual investment is allocated as follows: \$58B to the Industrial Tier, \$25B to the Essential Civilian Tier, and the remaining \$124B to the Nonessential Civilian Tier. An additional \$6B for direct defense investment is included in the Defense Tier. (U)

This section discusses investment required for the Industrial Tier only. The discussion is divided into four sections: (A) general investment requirements for defense and certain other essential needs, (B) investment for the energy industries, (C) investment for the minerals industries, and (D) other investment (primarily to offset depreciation). (U)

INDUSTRIAL TIER
Investment Summary (U)
(Billions of 1972\$)

	<u>1983</u>	<u>-- War Years --</u>		
		<u>1984</u>	<u>1985</u>	<u>1986</u>
General				
(Primarily				
Defense)	\$ 7.0	\$11.7	\$12.8	\$11.4
Energy	18.9	19.4	18.5	13.7
Minerals	2.0	3.5	3.7	2.4
Other	129.4	25.4	25.4	25.4
Total	\$157.3	\$60.0	\$60.4	\$52.9

A. GENERAL INVESTMENT REQUIREMENTS

Assessment of investment requirements began by translating essential demands into industry outputs and comparing those levels with previous real peak output levels from 1978 through 1981 to indicate which industries would be required to produce at levels higher than they had in the past. Those which were projected to produce at substantially higher levels than their past peaks were further evaluated. This process is iterative because investment is itself a final demand which places capacity requirements on the system. (U)

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In the initial run, all essential final demands--excluding most civilian investment--were run through FEMA's I-O model. This run included the direct investment in the DEIMS output as part of the Defense Tier. The resulting gross output by 257 industries was compared with peacetime data to identify industries that would require capacity expansions to meet projected gross output levels. This was a conservative approach because total industrial capacity is nearly always greater than that indicated by past peak output levels. (U)

Seventy industries showed scenario output levels in excess of recent peaks. Twenty industries required capacity expansion to meet essential (primarily defense) production needs. In the others, the output increase called for was well within the industry's ability to produce by increasing factor utilization. For the 20 industries with serious capacity shortfalls, the Office of Business Analysis (OBA) of the Department of Commerce estimated required investment levels for both structures and equipment. OBA also estimated the output of parts, materials, and supplies to produce this investment. (U)

Total maximum output for each of the 20 industries during 1972-1981 was computed by adjusting the historic annual output levels to reflect the output levels that could be achieved if the industry operated at a 95 percent capacity utilization rate. The capacity utilization data were obtained from the annual Census report on Capacity Utilization of Manufacturing Industries. These estimates of maximum output levels reflect usual production scheduling, i.e., a one-shift, five-day week. In a war emergency, double and triple shifting could increase maximum achievable output well above the levels used in this analysis. (U)

Required investment was calculated by relating OBA capital stocks data to maximum output estimates of the 20 industries. For each industry, the average capital-output ratio during 1972-1981 was multiplied by the industry's projected total output to project capital stock requirements. The difference between existing and projected capital stocks during the emergency period equals the new investment necessary to produce the essential requirements. Separate estimates were made for structures and producer's durable equipment. Additional investment to offset economic depreciation of existing capital stocks was calculated using OBA's capital flow model and was added to the net investment required to expand the capital stock. (U)

These estimates of required investment were compared to Defense Tier investment (see Step II, Part 1) in DEIMS. Wherever DEIMS investment levels were lower than the levels

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calculated by OBA, the investment already included in the DEIMS run was netted from the investment figures developed by OBA to avoid double-counting. Wherever DEIMS investment levels were higher than the levels calculated by OBA, the DEIMS numbers were taken as authoritative and the OBA numbers were omitted. Since they had already been passed through the I-O model in the DEIMS run, however, the DEIMS investment numbers were not added to the Industrial Tier. In such cases, OBA did include estimates of investment to offset economic depreciation. (U)

A recent Army report to Congress, Ammunition Production Base Study (2/27/84), estimates \$36.3B (1983\$) would have to be spent to modernize and construct the base needed to produce at wartime levels. This \$36.3B figure deflates to \$20.4B in 1972\$. Half of the total is in the DEIMS ammunition investment calculation. The other half, spread over four years, was added to the investment requirements calculated by OBA. (U)

General Investment Primarily Defense Related
(Billions of 1972\$)

<u>1984</u>	<u>1985</u>	<u>1986</u>
\$11.7	\$12.8	\$11.4

B. INVESTMENT REQUIREMENTS FOR ENERGY INDUSTRIES

Petroleum and Natural Gas

There is no exact relationship between investment and output in the production of petroleum and natural gas. This is due to the depletable nature of the resource, the need to explore continuously for and develop new fields, and the diminishing likelihood of new discoveries. Petroleum and natural gas production peaked in the early 1970's, and the domestic reserve base for both has declined by around 5 percent since then. DOE has estimated that substantial investment in oil and gas reserve development is necessary to prevent current production levels from falling. (U)

Investment in the petroleum and natural gas industry would require substantial increases over present levels just to maintain current output. Currently 50-70 percent of gross investment each year is for replacement. Recent net additions to the capital stock have only maintained constant production levels. This implies investment at levels less than those of recent years would result in lower production. (U)

U.S. petroleum and natural gas production in this scenario is projected to increase to levels 10-20 percent higher by 1986 than those forecast for the peacetime. Therefore, a robust investment program at levels higher than the previous peaks

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in 1981 will be necessary for at least three years to achieve the production in the scenario in view of historical patterns and declines in proven reserves. The very high projected prices would be the means of inducing substantial private investment. Investment is projected to increase substantially through the second war year and then decrease in the third war year. Much of the investment will be for enhanced recovery techniques in older, lower-48 fields where near-term increases in production can be attained. (U)

Precise, consistent data for petroleum and natural gas investment are not available from a consistent data source. Investment-by-industry data are available through 1980 only. This is a problem because the industry substantially increased investment spending during 1981. Investment-by-type data are available through 1982. In many cases, however, these data are confounded with data for other industries. Investment in Petroleum and Natural Gas Mining, Exploration, Shaft, and Wells structures (investment-by-type) is the one type of investment that is exclusively related to this industry. It comprises about 66 percent of total industry investment. Historical data through 1982 for this type of investment were used to project investment levels over the scenario. The other petroleum and natural gas investment-by-type categories were projected from their historic relationship to investment for Mining, Exploration, Shaft, and Well structures. (U)

Real investment is projected to increase more slowly in the first year than in the second because of response lags and because there is presently significant slack in the industry--idle equipment and structures that could be used. Mining exploration, shafts, and wells for petroleum and natural gas will increase by 15 percent during the warning year from \$7.4B in 1982 to \$8.5B in 1983. Investment of this type will continue to increase to rework old oil wells and drill new ones in the early years of the war. Investment is \$10.2B in 1984 and \$11.1B in 1985. In 1986, investment is projected to decline to \$8.6B. (U)

Based on historical relationships between investment in these structures and investment in mining and oil field machinery, and general construction machinery, total investment in the petroleum and natural gas industry increases from \$10.5B in 1983 to a peak of \$13.6B in 1985 before falling to \$10.3B in 1986. (U)

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U. S. Petroleum & Natural Gas
Statistics (U)

	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>
Investment (1972\$ B)	\$7	\$8	\$8	\$10	\$13 <u>1</u> /	\$12 <u>1</u> /
Domestic Average Crude Wellhead Price (1972\$/Barrel)	6.12	5.68	7.73	12.09	16.25	13.78
Percentage Change	- 1%	- 2%	29%	56%	34%	-15%
Production (Quads/Year)	39.5	40.1	40.5	40.4	40.4	40.1

* * * * *

Petroleum and Natural Gas
Production Projections 2/ (C)

	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Petroleum (MMB/D)				
- Peacetime	10.75	10.50	10.30	10.00
- War Scenario	10.75	11.00	11.00	11.00
Natural Gas (TCF/Year)				
- Peacetime	16.50	17.32	17.67	16.56
- War Scenario	19.50	19.17	19.32	19.78

1/ Estimates of total industry investment are based on the historic relationship of data available in Survey of Current Business on structures to data on total investment provided by OBA.

2/ Peacetime petroleum production based on DOE's National Energy Plan (10/83) projections. War scenario petroleum production estimated by EIA's OMS using NEP as a base. Natural Gas estimates simulated by Wharton (Wharton Baseline forecast of 10/83 for peacetime).

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Coal

Coal production rises and then falls over the scenario. Production of coal, however, could exceed the simulated levels, due to increased exports, for example. However, investment to meet these increased production levels would not be very large. The industry currently has substantial excess capacity and a low rate of necessary replacement investment. (U)

Investment in the coal industry roughly maintains the 1980 real levels of investment throughout the period at about \$1.7B per year except for 1986, when it falls to \$1.2B. (U)

Utilities

Investment in public utility structures is projected to decline from pre-war levels because many types of projects undertaken in the past several years can be delayed without adverse effect on output in the emergency period. Many areas currently have excess capacity, and the construction period is very long for most new projects. However, there are many partially completed new power plants that would be needed, and adequate investment has been provided for completion. We assumed recently started plants could not be finished and no further construction would begin. Investment was provided for both the petroleum and natural gas pipeline industries to insure against bottlenecks in delivery. In total, investment in energy-related public utilities is projected to gradually decrease from about \$7B in 1983 to \$2B in 1986. (U)

Energy Investment
(Billions of 1972\$) (U)

	<u>1983</u>	<u>-- War Years --</u>		
		<u>1984</u>	<u>1985</u>	<u>1986</u>
Petroleum & Natural Gas	\$10.5	\$12.5	\$13.6	\$10.3
Coal	1.7	1.7	1.7	1.2
Utilities	6.7	5.2	3.2	2.2
Total	<u>\$18.9</u>	<u>\$19.4</u>	<u>\$18.5</u>	<u>\$13.7</u>

A total of \$52B over the war period is projected for energy related investment. This should be ample to obtain the projected production levels, especially for oil and gas. Investment levels in 1984 and 1985 approach what would be a maximum expansion effort based on historical industry performance. (U)

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C. INVESTMENT REQUIREMENTS FOR STRATEGIC AND CRITICAL MINERALS INDUSTRIES

Investment for the strategic and critical minerals industries was determined by estimating base levels of replacement investment to maintain existing capacity and adding the costs of capacity expansions. The industrial expansions include those induced by higher prices, as well as others which may require concerted national programs such as the Defense Production Act. (U)

These estimates are generally conservative since they assume that all potential capacity expansions identified by the Bureau of Mines will take place. However, it is unlikely, based on the international supply/demand balance, that all expansions will be required simultaneously. The actual investment required can only be less than the resulting projections. (U)

Minerals Investment
(Billions of 1972\$) (U)

	<u>1983</u>	<u>-- War Years --</u>		
		<u>1984</u>	<u>1985</u>	<u>1986</u>
Mining	\$1.2	\$2.1	\$2.2	\$1.4
Processing	.8	1.4	1.5	.9
Total	\$2.0	\$3.5	\$3.7	\$2.3

Existing and potential capacity was provided by the Bureau of Mines for all twenty of the most significant strategic materials which were addressed in earlier tasks. Per unit expansion costs were applied to the difference between existing and potential capacity to determine total costs of capacity expansion for each material. Expansion of capacity takes time, so portions of the investment costs to increase capacity in 1984 through 1986 were allocated to 1983 through 1985. The estimates for the 20 materials were summed and divided between the mining and processing industries in proportion to historical levels. (U)

Replacement investment levels for mining and processing were projected for 1983-1986 based on Commerce data for 1975-1980. This base was added to the estimates of investment for capacity expansion. A total of \$9.5B over the war period is projected for minerals investment. A more detailed explanation of the calculations is included in Appendix A. (U)

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D. OTHER INVESTMENT REQUIREMENTS

Investment averaging \$5B was allocated to trucks and related equipment, and investment of \$0.4B per year to residential producer's durable equipment. The latter was the equipment component of new residential investment and was estimated to be consistent with the housing starts and investment in residential structures (discussed in Part 3 -- The Essential Civilian Tier). (U)

Economic depreciation in corporations other than those serving the defense, energy, and mining sectors is a little less than \$100B per year (1972\$). Some new investment was deemed necessary in these industries to offset losses in capacity due to depreciation and thereby to maintain the capacity of these industries to produce essential output. Investment of \$20B each year was judged more than adequate. (U)

For several reasons this new investment does not need to be as large as economic depreciation. First, full capacity utilization, even as measured conventionally, is not reached in a great many industries: the peak output, as estimated in the I-O analysis, is often less than past peak output; in numerous industries the year of past peak output was not a year of full capacity utilization; and capacity generally grew between the year of the past peak output and the beginning of the war. Second, large numbers of industries normally operate on the basis of one-shift, five-day week, and therefore could easily expand their output far beyond measured capacity by double-shifting, weekend work, or even triple shifting. Finally, economic depreciation does not imply productive capacity is reduced by as much as the depreciation, or is necessarily reduced at all. In the absence of detailed and reliable information on industry-by-industry requirements, the \$20B of annual investment was divided among industries (other than defense, energy, and mining) with proportionately larger amounts allotted to industries that produced at relatively high levels compared with past peak output. (U)

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Part 3 -- The Essential Civilian Tier

PERSONAL CONSUMPTION EXPENDITURES (PCE)

Personal consumption expenditures are the bulk (65%) of the peacetime economy, and constitute 58 percent of projected wartime economic activity. PCE are, by convention, divided into three categories--durables, nondurables, and services. PCE have grown at an average rate of 2.8 percent over the last 35 years, and the last years of decline were in 1942 (the first year of World War II) and 1974 (following the energy crisis of 1973). The simulations projected an average annual 1.6 percent decline during the mobilization and first war year followed by an average 4.1 percent increase in the second and third years, as follows:

(U)

(Billions of 1972\$)

	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Personal Consumption Expenditures	\$970.2	\$958.1	\$939.8	\$965.8	\$1019.3
Durable Goods	139.8	146.6	98.8	99.9	108.9
Nondurable Goods	364.2	347.5	361.7	372.3	393.7
Services	466.2	464.0	479.3	493.6	516.7

(U)

o Consumer Durables.

Durables include autos, appliances, furniture, and other miscellaneous items, which comprised about 14 percent of PCE in 1982. Because durables are, by definition, consumed over many years, their life can be extended through repair and maintenance and new purchases are postponable. In World War II durables fell to 60 percent of the 1941 level, and they generally fall disproportionately during recessions. (U)

- Autos and parts consists of new cars, used cars, other motor vehicles (vans and recreational vehicles), and tires and parts. In 1981, the U.S. had 124 million automobiles and 35 million trucks and buses registered--one vehicle for every 1.4 people. During the war, gasoline prices are projected to rise to nearly \$4.00 per gallon, causing miles driven per car to drop by 30 percent. The motor vehicle industry and

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skilled labor force will be required for defense production. In World War II, automobile production dropped from 3,799,600 units in 1941 to 222,800 in 1942 to 100 in 1943, a time when there was only one car for 4.5 people. Therefore, the working group believes the existing fleet is adequate and excluded almost all new production from the Wharton simulations. An average of \$13.3B out of the remaining \$19.6B was deemed essential to maintain the existing fleet. (U)

- Furniture and household equipment consists of furniture, appliances, china, radios, TV's, and other household goods. The U.S. has an abundant stock of these durables: In 1979, 99.9 percent of electrically wired homes had TV's, radios, coffeemakers, irons, toasters, and vacuum cleaners; 99.8 percent had refrigerators; 69.4 percent had electric ranges; 26.0 percent had hot plates or buffet ranges; 92.8 percent had food mixers; 77.3 percent had washers and 61.5 percent dryers (including gas dryers); and 52.4 percent had blenders. There is also a large stock of furniture and china and we recommend classifying as essential \$2.5B (out of \$12.0B) worth of appliances to allow for maintenance of the existing stock and to equip the 300,000 units of new housing projected to be constructed annually. (U)
- Other durable goods include ophthalmic/orthopedic appliances, toys, boats, pleasure aircraft, jewelry, watches, books and maps. The working group recommends considering ophthalmic/orthopedic devices essential. Consumption in this category has been flat at just under \$3.0 billion in recent years. (U)

<u>Category</u>	<u>Average Value 1984-86 (72\$)</u>	<u>Essential</u>
Autos and parts		
Furniture and Household equipment	\$19.6B	\$13.3B
Other durable goods (U)	59.5	2.3
	23.4	3.0

o Consumer Nondurable Goods

Consumer nondurables make up 38 percent of PCE and include food, beverages, clothing, gasoline, oil, tobacco, toiletries, etc. The macro simulations projected an increase from \$364.2B in 1982 to \$393.7B in 1986, which averages 2.0 percent annually. It is difficult to separate the essential from the nonessential in these items and the working group, to avoid arbitrary judgments and to err on the side of caution, recommends all nondurables be classified essential to the extent they can be produced with existing industrial capital stock during the three-year war. (U)

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o Consumer Services

Consumer services are about 47 percent of PCE and consist of housing (rents and imputed income to owners), household operation (utilities), transportation, and other (two-fifths of which is medical services). Services are forecast to grow from \$466.2B in 1982 to \$516.7B in 1986 (2.6 percent annually) and are unlikely to encounter capacity constraints during the three-year war. The working group recommends all services be classified essential to the extent they can be produced with the existing capital stock. Assessments indicate that the existing capital stock is sufficient to provide these services. (U)

RESIDENTIAL FIXED INVESTMENT

The U.S. had an inventory of 88,411,000 housing units in 1980, 91 percent of which were occupied. There is an average of one housing unit for each 2.6 people. By comparison, in 1940 there were 37,317,000 units, 93 percent of which were occupied. There was an average of one housing unit for every 3.5 people. The housing industry has begun as many as 2.3 million new units in a year, but there were 1.3 and 1.1 million starts in 1980 and 1981 when high interest rates reduced demand for new housing. The wartime scenario may necessitate some new housing units to accommodate population shifts. However, the relatively low housing density rates and the high vacancy rates suggest the existing housing stock is generally adequate. High wartime interest rates would reduce housing demand substantially. Accordingly, we recommend classifying as essential 500,000 new housing units in the first war year and 200,000 in each subsequent year. (U)

Residential Fixed Investment
(Billions of 1972\$) (U)

<u>1982</u>	<u>1983</u>	-- War Years --		
\$37.8	\$53.9	<u>1984</u>	<u>1985</u>	<u>1986</u>
		\$33.6	\$21.0	\$20.7

FEDERAL NONDEFENSE PURCHASES

Real Federal nondefense purchases fell by one-half during World War II. In the Wharton simulations, real nondefense purchases were adjusted exogenously to reflect anticipated wartime austerity and they are projected to average 58 percent of 1982 (premobilization) levels. We recommend the remaining be classified as essential. (U)

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Federal Nondefense Purchases
(Billions of 1972\$) (U)

<u>1982</u>	<u>1983</u>	<u>-- War Years --</u>		
		<u>1984</u>	<u>1985</u>	<u>1986</u>
\$35.7	\$27.4	\$22.0	\$21.0	\$20.0

STATE AND LOCAL PURCHASES

Real purchases of goods and services by State and local governments fell by about 15 percent during World War II. Exogenous expenditure adjustments were made to reflect wartime austerity. Average State and local purchases are projected to decline 8% below prewar levels in real terms, and we recommend this level be classified as essential. (U)

State and Local Government Purchases
(Billions of 1972\$) (U)

<u>1982</u>	<u>1983</u>	<u>--- War Years ---</u>		
		<u>1984</u>	<u>1985</u>	<u>1986</u>
\$175.2	\$175.5	\$165.0	\$162.0	\$157.0

IMPORTS/EXPORTS

The import/exports accounts were adjusted exogenously in the Wharton simulations to reflect likely changes in wartime trade patterns. With higher costs of international transportation and changes in international commodity supplies and demands, the volume and composition of international trade are expected to change dramatically, as demonstrated by World War II trade statistics: (U)

Foreign Trade in World War II
(Billions of 1972\$) (U)

	<u>1940</u>	<u>1941</u>	<u>1942</u>	<u>1943</u>	<u>1944</u>	<u>1945</u>
Exports	\$15.5	\$16.4	\$11.4	\$ 9.8	\$10.5	\$13.8
Imports	11.1	13.2	12.0	15.7	16.8	17.5

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With a simultaneous 30 percent drop in exports and 28 percent increase in imports, the United States went from the position of positive net exports averaging \$3.8B to wartime net imports averaging \$4.1B. The comparable figures projected for the stockpile scenario are: (U)

Projected Foreign Trade
(Billions of 1972\$)

	<u>1981</u>	<u>1982</u>	<u>1983</u>	-- War Years -- <u>1984</u> <u>1985</u> <u>1986</u>		
Exports	\$159.7	\$147.3	\$151.8	\$135.8	\$138.6	\$139.3
Imports	116.7	118.4	143.3	124.1	127.6	127.5
	(U)					

A low level of positive net exports is projected for the war years. The accounts were adjusted to eliminate low-priority civilian exports and imports, to provide capital goods required by foreign countries, and to ensure that the U.S. exports were sufficient to finance imports. The assumptions are very conservative, with the United States acting as a net exporter during a major war. The working group recommends all exports and imports be placed in the Essential Civilian Tier except for exports of consumer durables (about \$1.0B) which we recommend be placed in the Nonessential Civilian Tier. (U)

INVENTORIES

Inventories are used to assure smooth flows of goods and services through the production and distribution system of the economy. Defense inventories are encompassed in the Defense Tier and inventories for Essential Civilian and Industrial needs are classified in the Essential Civilian Tier. The inventory stock at the end of 1982 was \$338 billion (1972 dollars). The inventory stock can be thought of as having three parts: (U)

- o Defense stocks, which are needed to produce and distribute the projected level of defense final demand. (U)
- o Essential inventories, other than defense, needed to produce and distribute essential final sales other than defense. (U)
- o Nonessential inventories needed to produce and distribute final sales of nonessential personal consumption and non-essential business fixed investment. (U)

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The government needs only to ensure sufficient materials for the first two categories, while materials for the third category must be obtained through the private sector. Defense outlays used in the macro scenario include both final purchases of the Defense Department and the inventories needed to produce these goods and services. (U)

The three final sales components are shown in the following table from the macro scenario adopted by the Steering Group: Defense purchases excluding compensation (Line 7), essential final sales other than defense (Line 10) and nonessential final sales (Lines 8 & 9). Following National Income and Product Accounting conventions, business final sales (comprising defense, essential, and nonessential purchases) are obtained by subtracting from real GNP four categories: inventory change, government compensation, household and institutional output, and rest-of-world net product. The calculation is shown below, Lines 1-6. To estimate the appropriate level of essential inventories during the war years the GNP for 1982 and 1983 as well as 1984-86 was divided into its essential, defense, and nonessential components, consistent with the war years' definitions. (U)

Final Sales: Defense, Other Essential and Nonessential
(Billions of 72\$)

	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
1. GNP, macro scenario	\$1,485	\$1,510	\$1,592	\$1,683	\$1,744
<u>Less</u>					
2. Inventory change	-9	-6	4	14	8
3. Government compensation	156	170	201	215	218
4. Household output	47	48	48	49	50
5. Rest-of-world product, net	23	21	23	24	27
<u>Equals</u>					
6. Business final sales	1,269	1,277	1,315	1,380	1,441
<u>Less</u>					
7. Defense purchases, excluding compensation	45	91	178	228	250
8. Nonessential personal consumption expenditures	122	127	81	82	87
9. Nonessential business fixed investment	101	97	105	110	107
<u>Equals</u>					
10. Essential final sales other than defense	1,001	963	951	959	997

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Inventory stocks consistent with essential final sales amount to \$277B in 1982 and fall to \$252B by 1986. The \$25B decline is almost entirely the result of an assumed 2 percent per year fall in the inventory-sales ratio during the war from 3.32 in 1982-83 to 3.04 by 1986. The decline is justified in terms of improved efficiency in the utilization of inventories. Since the mid-1970s, the efficiency improvement has averaged 1 percent per year. The assumed better performance during 1984-86 reflects heightened pressures to economize on inventories in a war-scarcity, high interest rate environment. (U)

Essential Inventory Stock Other than Defense
(Billions of 72\$)

	<u>1982</u>	<u>1986</u>	<u>Change</u> <u>1982-86</u>
Essential final sales other than defense	\$1,001	\$ 997	-4
Inventory-sales ratio	3.32	3.04	
Essential inventory other than defense	\$ 277	\$ 252	-25

In addition to the \$25B reduction in required essential inventories due to improved efficiencies in their use, a further \$19B of nonessential inventories is assumed to be convertible to essential uses during the war. This diversion of nonessential inventories to the war effort frees a comparable amount of productive resources for essential consumption, investment and defense needs. The \$19B represents 5.6 percent of the 1982 inventory stock. It was assumed the efficiency gains would be realized smoothly over the scenario years 1983-86 while the conversion of nonessential inventories to essential uses would occur in the war years. The result of the two effects is a change in inventories of: (U)

	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Inventory change	-7	-12	-13	-12

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Part 4 -- Nonessential Civilian

The nonessential tier comprises production for final demand which is not essential for the nation to achieve its national security objectives. This production will be met through materials supplies provided by the private sector or through materials conservation and substitution. (U)

We recommend all economic activity projected in the Wharton econometric runs but not allocated above to the Defense, Industrial, or Essential Civilian tiers be classified as Nonessential Civilian. This tier would be about 12% of the projected wartime economy adopted by the Steering Group include the following: (U)

Nonessential Civilian Tier
(Billions of 1972\$)

-- War Years --

	<u>1984</u>	<u>1985</u>	<u>1986</u>
Personal Consumption Expenditures--Durables	\$ 80.9	\$ 81.9	\$ 89.9
Gross Private Investment	114.6	132.6	124.3
Net Exports	<u>1.0</u>	<u>1.0</u>	<u>1.0</u>
Total (U)	\$196.5	\$215.5	\$215.2

- o Durable PCE--The essential durable PCE are described in detail on pp. 20-21 above. The nonessentials include luxuries such as private aircraft, automobiles and other motor vehicles; new furniture, china, and most appliances including TV sets; and jewelry, books, and toys.
- o Gross private investment--This represents investment which may be postponed until after the wartime emergency while still expanding and maintaining productive capacity to meet essential defense and civilian needs. It includes investment such as new shopping malls and restaurants, expansion of factories which produce nonessential outputs, or replacement of capital equipment which could be economically maintained through the emergency. (U)
- o Net Exports--It is recommended that exports of all consumer durables are to be classified as nonessential. As explained above, all other exports are classified in the essential civilian tier. (U)

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III. ESTIMATION OF INDUSTRIAL OUTPUT

The following GNP final demands allocated to the Tiers were processed through two different I-O systems--DEIMS for the Defense Tier and FEMA's DITT for the Industrial, Essential Civilian, and Nonesential Civilian Tiers: (S)

ALLOCATION OF WHARTON-SIMULATED GNP FINAL DEMANDS
TO THE TIERS (S)
(Billions of 1972\$)

	<u>1984</u>	<u>1985</u>	<u>1986</u>
Defense	\$ 246	\$ 309	\$ 338
Industrial	60	60	53
Essential Civilian	1090	1098	1138
Nonesential Civilian	<u>197</u>	<u>216</u>	<u>215</u>
Total	\$1593	\$1683	\$1744

Analysis of Results

The gross output results provide a characterization of the Strategic industrial output requirements associated with the war scenario. Technological change in the last forty years and a large increase in the civilian economy combine to produce a different wartime industrial output mix from that obtained in World War II. In general, current industrial requirements strongly favor the advanced manufacturing industries. Primary processing industries, such as mining and steel production, remain subject to heavy defense demands. Industries producing mechanical, electro-mechanical and electronic equipment are subject to significant military requirements. Some industries producing traditional military hardware such as aircraft, ammunition and tanks continue to show heavy production requirements. (U)

SECRET

The Working Group has evaluated the ability of each industry to produce at projected wartime levels in order to verify that adequate investment has been provided for capacity expansion. There are generally not available accurate measures of industrial capacity for each industry so the Working Group has compared projected peak output to actual peak output during 1978-81. Since capacity expansion has taken place since that period and since few industries were actually operating at 100 percent of capacity, the ratio of essential output to previous peak output will generally overstate the need for capacity expansion. For example, an industry which had peak production in 1979 with 80 percent capacity utilization and which grew four percent annually through 1983, would be capable of producing at 146 percent of its 1979 level with no capacity increase. (U)

Investment requirements for direct and indirect defense, energy, strategic and critical minerals industries, as well as other industries were estimated to average \$89B per year. Of this total, \$6B is in the Defense Tier; \$58B is in the Industrial Tier, and \$25B is in the Essential Civilian Tier. Of the \$58B in the Industrial Tier, 21 percent is primarily defense related (see pages 12-14), 29 percent is energy related (see pages 14-17), 6 percent is strategic and critical minerals related (see page 18 and Appendix A); and 44 percent is for more general purposes (see page 19). The investment in the Essential Civilian Tier is for residential housing construction. These investment levels are adequate to meet the capacity needs of all industries producing essential output. (U)

Essential output exceeds 1978-81 production peaks in only 70 industries. These consist of 10 direct defense producers (e.g., tank production), 8 major component or indirect defense industries (e.g., semiconductors), 11 agricultural or food processing industries (e.g., livestock products), 22 miscellaneous industries producing for indirect defense and civilian requirements (e.g., apparel), 4 mining and energy-related industries, and 15 industries where extraordinary output could be realized without investment in new capacity (e.g., real estate). (U)

Excluding the 15 industries where capacity expansion is not essential, projected real gross output of the remaining 55 industries is \$779.4B in 1986. This output level represents 31 percent of total essential gross output in 1986. The remaining 187 industries are producing at less than peacetime peak production levels (except for government compensation for which capacity measurements are not relevant). For these industries capacity constraints are unlikely. Unused normal capacity, interindustry substitutions in production, higher factor utilization rates (e.g., overtime or double shifting) and substitutions of inputs can be expected to meet these production levels. (U)

DIRECT DEFENSE PRODUCTION

Ten industries are heavily affected by the DEIMS estimates of military requirements. The maximum percentage increases from peacetime outputs are as follows: (U)

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<u>Industry</u>	<u>Peak Wartime Output as a Percent of Peacetime Peak</u>
Ammunition	823%
Other Ordnance	822
Tank Components	564
Shipbuilding	499
Military Facilities M&R	448
Small Arms Ammunition	401
Aircraft & Equipment NEC	215
Aircraft Engines and Parts	200
Aircraft	192
Guided Missiles	185

Military production for these ten industries reaches a maximum of \$119.7B or 5 percent of total essential output by 1986, the third year of the war. Since the output of these ten industries rises steadily over three years to the 1986 peak, there is time for capacity expansion to occur. It is also important to note that many firms in these industries have substantial excess capacity in the form of mothballed production facilities which can be brought into production. A discussion of why the increases in output of these industries vary is found at Appendix B. (U)

MAJOR COMPONENT AND INDIRECT DEFENSE PRODUCTION

Eight industries are classified in this category because the defense demand on their production is particularly high relative to civilian demand. Gross output is from two to five times the peacetime peak production levels. (U)

<u>Industry</u>	<u>Peak Wartime Output as a Percent of Peacetime Peak</u>
Electronic Measuring Instruments	514%
Semiconductors	486
Radio & TV Communications Equipment	443
Primary Metal Products NEC	337
Nonferrous Forgings	267
Misc. Chemicals	248
Metal Cutting Tools	237
Engineering, Lab., Scientific Equipment	191

Production in these eight industries peaks at \$109.4B or 4 percent of total essential output in 1986. Indirect defense production is very likely overstated in these second tier

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industries due to the fixed coefficient method of characterizing production. As discussed earlier, in industries where production levels are relatively high, substitution will occur that is not reflected in an I-O analysis. Where feasible, other industries will shift into production in these high-demand areas. For example, the industry producing radio and television receiving sets (and imports) would probably shift to some degree to producing (and importing) radio and television communications equipment. Also, existing stocks of machine tools in other industries can, for example, be diverted to indirect defense production. The I-O analysis does not measure the potential for such interindustry substitution in production. On the other hand, in an I-O model, intraindustry substitution is assumed to be complete. This assumption possibly increases capital requirements in defense industries. This bias was offset to some extent in the DEIMS investment assumptions. On balance, the two sources of error will tend to cancel, but the net effect is unknown.(U)

AGRICULTURAL AND FOOD PROCESSING INDUSTRIES

The eleven industries classified in this category produce \$239.1B or 9 percent of total essential output. With steady growth in this sector, every year generally represents a new production peak. Hence, 1986 production in excess of historical peaks is a normal development equally likely under peacetime conditions. The figures do not reflect a redistribution of food consumption patterns which we assume could occur. Nor was any drawdown of current stocks assumed. The United States currently has sufficient stocks to meet 30 months of consumption of milk and 12 months of butter and cheese. If, for example, consumption is diverted towards a higher proportion of direct grain consumption or if stocks are drawn down, output requirements would fall. The maximum percentage increases from peacetime outputs are as follows:
(U)

<u>Industry</u>	<u>Peak Wartime Output as a Percent of Peacetime Peak</u>
Forestry and Fisheries	135%
Meat Products	112
Canned and Preserved Fruits	112
Bakery Products	112
Misc. Food Preparations	112
Grain Mill Products	111
Livestock Products	110
Dairy Products	108
Fats and Oils	105
Agricultural, Forestry, and Fish Services	105
Crops and Agricultural Products	102

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MISCELLANEOUS PRODUCTION

Twenty-two miscellaneous industries that produce \$258.9B or 10 percent of total essential output show peak production levels of 100-174 percent of peacetime. The maximum percentage increases are: (U)

<u>Industry</u>	<u>Peak Wartime Output as a Percent of Peacetime Peak</u>
Metal Working Machinery	174 8
Primary Nonferrous Metals	172
Electronic Components NEC	167
Optical Instruments	162
Industrial Trucks	158
Coating and Engraving	131
Metal Forming Tools	129
Computing and Calculating Machines	126
Non-electrical Control Instruments	126
Footwear	125
Wooden Containers	124
Water and Sanitary Services	118
Apparel	117
Leather Tanning	116
Misc. Machinery Exc. Electric	108
Medical and Health Services	107
Personal and Misc. Repair	106
Metal Cans	105
Metal Barrels	104
Cordage and Twine	104
Fertilizers	102
Glass Containers	100

MINING AND ENERGY RELATED INDUSTRIES

Four mining and energy-related industries show increased production levels. In 1986, they produce \$52.4B or 2 percent of total essential output. The output of three of these industries rises and then falls during the scenario. Some of the increase is in response to the assumed increase in primary and secondary recovery effort. The maximum percentage increases are: (U)

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<u>Industry</u>	<u>Peak Wartime Output as a Percent of Peacetime Peak</u>
Oil and Gas Field Service	156% (in 1985)
Mining Machinery and Equipment	131 (in 1985)
Gas Utility Construction	122 (in 1984)
Electrical Service Utilities	102 (in 1986)

Investment programs were developed for strategic and critical minerals industries (see page 18 and Appendix A) and for energy industries (see pages 14-17) which cause output in Mining Machinery and Equipment and Oil and Gas Field Service industries to increase. The Working Group notes that the assumed investment in mining may be overstated because many mining industries are operating at less than full capacity in the simulation. (U)

LESS ESSENTIAL INDUSTRIES

Fifteen other industries produce at levels in excess of previous peaks. They are considered capable of producing these levels of output with no investment in capacity. They produce \$664.5B or 26 percent of total essential output. (U)

<u>Industry</u>	<u>Peak Wartime Output as a Percent of Peacetime Peak</u>
Nonprofit Organizations	130%
Owner-Occupied Dwellings	116
Eat and Drink Places	115
Confections	115
Educational Services	113
Residential Maintenance & Repair	113
Soft Drinks	112
Motion Pictures	109
Misc. Business & Prof Services	108
Tobacco	104
Hotels	104
Alcoholic Beverages	102
Real Estate	102
Toilet Preparations	102
Finance and Insurance	101

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The following tables (pp. 35-55) present the I-O Working Group estimates of gross output by industry for each tier. Outputs for 257 industries for the Industrial, Essential Civilian, and Nonessential Civilian Tiers were calculated by FEMA. Defense Tier outputs were calculated by DOD for 400 industries which were aggregated to 257 industries to conform with FEMA's classifications. These gross outputs by industry will be used by the Materials Working Group to estimate the strategic materials required to produce the outputs for each tier. (U)

Two estimates of total gross output are provided--one with and one without the Nonessential Civilian Tier. An estimate of output for each of the three essential tiers is necessary in order to calculate material requirements. An estimate of gross output and associated material requirements for the Nonessential Civilian Tier is necessary to estimate world demand for strategic materials since producers of nonessential output will affect demand for the materials they use in their production processes. (U)

Gross Outputs By Tier
(Billions of 1972\$) (U)

	<u>1984</u>	<u>1985</u>	<u>1986</u>
Defense	\$ 377	\$ 502	\$ 570
Industrial	121	122	108
Essential Civilian	<u>1762</u>	<u>1771</u>	<u>1851</u>
Total Essential Output	\$2260	\$2395	\$2529
Nonessential Civilian	<u>397</u>	<u>439</u>	<u>431</u>
Total Output	\$2657	\$2834	\$2960

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FEDERAL EMERGENCY MANAGEMENT AGENCY -- NATURAL RESOURCES DIVISION (NRP-RP-NR)
1984 STOCKPILE GOALS STUDY -- WAR SCENARIO LAD3 (LAD3)
TOTAL OUTPUT IN MILLIONS OF 1972\$

	1983	1984	1985	1986	1983	1984	1985	1986	1983	1984	1985	1986
	DEIMS	DEIMS	DEIMS	DEIMS	DEIMS	DEIMS	DEIMS	DEIMS	DEIMS	DEIMS	DEIMS	DEIMS
	DOD	DOD	DOD	DOD	DOD	DOD	DOD	DOD	DOD	DOD	DOD	DOD
01000 LIVESTOCK PRODUCTS	599.	870.	1125.	1279.	47989.	51034.	52620.	55922.				
02000 CROPS & AGRIC. PRODUCTS	461.	720.	945.	1075.	40027.	43490.	45061.	47635.				
03000 FORESTRY & FISH SERV.	181.	291.	384.	437.	2559.	2544.	2659.	2879.				
04000 AGRIC., FOREST., FISH SERV.	79.	133.	175.	199.	4237.	4367.	4486.	4732.				
05000 IRON & FERROALLOY MINING	410.	867.	1167.	1312.	351.	37.	-50.	3.				
06000 COAL MINING	279.	554.	740.	832.	297.	105.	-30.	6.				
07000 COPPER ORE MINING	136.	279.	383.	438.	-368.	-385.	5008.	-436.				
08000 NONFERROUS ORES	407.	790.	1057.	1177.	5348.	4698.	5008.	5341.				
09000 CRUDE PETRO. & NATURAL GAS	1212.	1972.	2549.	2832.	11174.	11027.	11961.	12365.				
10000 STONE & CLAY MINING	143.	253.	326.	370.	574.	683.	703.	725.				
11000 CHEM. & FERT. MINERAL MNO.	34.	62.	82.	92.	769.	669.	677.	712.				
11010 RESID. HOMES CONSTRUCTION	1.	1.	1.	1.	27057.	16041.	10029.	10022.				
11021 RESID. APARTMENT CONSTR.	182.	315.	332.	336.	10116.	5083.	3059.	3045.				
11022 NEW RESID. ALTERATIONS	18.	31.	37.	41.	9029.	5021.	3015.	3011.				
11023 HOTEL, MOTEL CONSTRUCTION	47.	76.	91.	111.	53.	38.	27.	21.				
11030 INDUS. BLDG. CONSTRUCTION	108.	163.	209.	237.	155.	39.	39.	39.				
11041 OFFICE BLDG. CONSTRUCTION	0.	0.	0.	0.	353.	210.	163.	133.				
11042 WAREHOUSE, GARAGE CONSTR.	77.	131.	164.	203.	0.	0.	0.	0.				
11043 HOSPITAL CONSTRUCTION	106.	171.	201.	253.	359.	229.	167.	130.				
11044 RELIG., EDUC. CONSTRUCTION	38.	64.	73.	86.	1825.	1262.	906.	690.				
11051 TELEPHONE CONSTRUCTION	2.	3.	4.	5.	0.	0.	0.	0.				
11052 RAILROAD CONSTRUCTION	18.	33.	40.	45.	0.	0.	0.	0.				
11053 ELECT. UTIL. CONSTRUCTION	61.	103.	117.	138.	290.	206.	147.	111.				
11054 GAS UTILITY CONSTRUCTION	0.	0.	0.	0.	11.	8.	6.	4.				
11055 PETRO. PIPELINE CONSTR.	42.	63.	83.	102.	1169.	833.	594.	449.				
11056 SANITARY SYSTEMS CONSTRUCTION	59.	102.	121.	139.	143.	102.	73.	55.				
11060 HIGHWAY CONSTRUCTION	407.	539.	600.	650.	1722.	1141.	827.	637.				
11070 MILIT. FACIL. CONSTRUCTION	0.	0.	0.	0.	16.	4.	4.	4.				
11081 OIL & GAS FIELD SERVICE	92.	144.	163.	194.	0.	0.	0.	0.				
11092 OTHER NON-BLDG. CONSTR.	456.	759.	903.	952.	1544.	1441.	14747.	15426.				
12010 RESIDENTIAL M & R	0.	0.	0.	0.	14308.	9126.	9093.	9385.				
12020 NON-RESIDENTIAL M & R	0.	0.	0.	0.	10461.	1154.	1179.	1234.				
12031 TELEPHONE M & R	0.	0.	0.	0.	1164.	1265.	1265.	1339.				
12032 RAILROAD M & R	0.	0.	0.	0.	1646.	1480.	1508.	1579.				
12033 ELECTRIC UTILITIES M & R	0.	0.	0.	0.	371.	378.	387.	404.				
12034 GAS UTILITIES M & R	0.	0.	0.	0.	85.	85.	85.	89.				
12035 PETROLEUM PIPELINE M & R	0.	0.	0.	0.	2220.	2057.	2099.	2208.				
12036 SANITARY SYSTEMS M & R	0.	0.	0.	0.	155.	143.	146.	153.				
12037 LOCAL TRANSIT M & R	0.	0.	0.	0.	0.	0.	0.	0.				

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1984 STOCKPILE GOALS STUDY -- WAR SCENARIO LAD3 (LAD3)
TOTAL OUTPUT IN MILLIONS OF 1972\$

	1983	1984	1985	1986	1983	1984	1985	1986
	DETHS	DETHS	DETHS	DETHS	ESSENTIAL	ESSENTIAL	ESSENTIAL	ESSENTIAL
	DOD	DOD	DOD	DOD	CIVILIAN	CIVILIAN	CIVILIAN	CIVILIAN
12040 HIGHWAY M & R	0.	0.	0.	0.	736.	551.	429.	360.
12050 MILITARY FACILITIES M & R	1940.	3246.	4176.	4743.	0.	0.	0.	0.
12061 OIL & GAS WELL M & R	0.	0.	0.	0.	414.	406.	443.	458.
12062 CONSERVATION, DEVEL. M & R	0.	0.	0.	0.	647.	540.	534.	549.
13010 GUIDED MISSILES	3261.	5777.	6253.	6542.	599.	495.	475.	459.
13020 TANKS COMPONENTS	1109.	4145.	4994.	5084.	4.	18.	18.	19.
13031 AMMUNITION	3841.	11855.	18123.	21123.	102.	48.	26.	8.
13032 SMALL ARMS AMMUNITION	803.	2409.	3748.	4357.	282.	287.	283.	290.
13041 SMALL ARMS	95.	272.	344.	362.	362.	-23.	-341.	-567.
13042 OTHER ORDNANCE	1519.	3078.	4016.	4510.	33.	18.	10.	5.
14011 MEAT PRODUCTS	460.	729.	957.	1092.	36503.	38924.	40148.	42661.
14012 DAIRY PRODUCTS	240.	341.	452.	519.	15575.	17319.	17868.	18946.
14013 CANNED, PRESERVED FRUITS	166.	255.	342.	389.	14147.	14871.	15346.	16283.
14014 GRAIN MILL PRODUCTS	167.	251.	330.	377.	14363.	15039.	15627.	16714.
14015 BAKERY PRODUCTS	68.	108.	144.	165.	9333.	9823.	10141.	10759.
14016 CONFECTIONERY PRODUCTS	63.	105.	140.	159.	7530.	8446.	8683.	9187.
14017 SOFT DRINKS	73.	114.	152.	174.	7112.	7432.	7679.	8158.
14018 FATS & OILS	112.	177.	231.	264.	7302.	7205.	7494.	8033.
14019 MISC. FOOD PREPARATIONS	74.	116.	153.	176.	6859.	7219.	7435.	7894.
14020 ALCOHOLIC BEVERAGES	242.	458.	624.	720.	13614.	13977.	14600.	14600.
15000 TOBACCO MANUFACTURING	22.	41.	55.	60.	9838.	9904.	10242.	10863.
16000 FABRIC & YARN	355.	599.	784.	888.	21153.	19594.	20148.	21213.
17010 FLOOR COVERINGS	36.	70.	86.	93.	2561.	376.	274.	282.
17021 CORRAGE & TWINE	63.	107.	138.	155.	185.	147.	121.	113.
17022 MISC. TEXTILE GOODS	72.	139.	189.	214.	2792.	2164.	1989.	1993.
18000 APPAREL	231.	371.	503.	579.	39921.	44552.	46209.	49523.
19000 MISC. TEXTILE PRODUCTS	284.	497.	629.	689.	4883.	3752.	3861.	4095.
20001 LOGGING CAMPS	472.	889.	1174.	1323.	9619.	6053.	5707.	6132.
20002 MILLWORK	32.	54.	62.	67.	2650.	1523.	1039.	1045.
20003 VENEER & PLYWOOD	246.	457.	596.	668.	4956.	2479.	2021.	2034.
21000 WOODEN CONTAINERS	78.	210.	311.	358.	372.	306.	310.	329.
22000 HOUSEHOLD FURNITURE	111.	195.	236.	254.	6087.	-333.	-328.	-347.
23000 OTHER FURNITURE	142.	220.	274.	305.	836.	347.	351.	342.
24010 PAPER MILLS	401.	722.	959.	1069.	6103.	5575.	5885.	6167.
24020 PAPERBOARD MILLS	254.	483.	650.	737.	5058.	4544.	4723.	4973.
24030 BUILDING PAPER	291.	511.	675.	767.	8431.	7719.	7775.	8185.
25000 PAPERBOARD CONTAINERS	488.	877.	1207.	1372.	7824.	6915.	7010.	7423.
26000 PRINTING & PUBLISHING	603.	1028.	1452.	1543.	13359.	24391.	24615.	25648.
27010 INDUSTRIAL CHEMICALS	2180.	3739.	4687.	5245.	14006.	12138.	12295.	12946.
27021 FERTILIZERS	66.	209.	310.	363.	2617.	2860.	2972.	3144.

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TOTAL OUTPUT IN MILLIONS OF 1974

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	2911	2912	2913	2914	2915	2916	2917	2918	2919	2920	2921	2922	2923	2924	2925	2926	2927	2928	2929	2930	2931	2932	2933	2934	2935	2936	2937	2938	2939	2940	2941	2942	2943	2944	2945	2946	2947	2948	2949	2950	2951	2952	2953	2954	2955	2956	2957	2958	2959	2960	2961	2962	2963	2964	2965	2966	2967	2968	2969	2970	2971	2972	2973	2974	2975	2976	2977	2978	2979	2980	2981	2982	2983	2984	2985	2986	2987	2988	2989	2990	2991	2992	2993	2994	2995	2996	2997	2998	2999	3000	3001	3002	3003	3004	3005	3006	3007	3008	3009	3010	3011	3012	3013	3014	3015	3016	3017	3018	3019	3020	3021	3022	3023	3024	3025	3026	3027	3028	3029	3030	3031	3032	3033	3034	3035	3036	3037	3038	3039	3040	3041	3042	3043	3044	3045	3046	3047	3048	3049	3050	3051	3052	3053	3054	3055	3056	3057	3058	3059	3060	3061	3062	3063	3064	3065	3066	3067	3068	3069	3070	3071	3072	3073	3074	3075	3076	3077	3078	3079	3080	3081	3082	3083	3084	3085	3086	3087	3088	3089	3090	3091	3092	3093	3094	3095	3096	3097	3098	3099	3100	3101	3102	3103	3104	3105	3106	3107	3108	3109	3110	3111	3112	3113	3114	3115	3116	3117	3118	3119	3120	3121	3122	3123	3124	3125	3126	3127	3128	3129	3130	3131	3132	3133	3134	3135	3136	3137	3138	3139	3140	3141	3142	3143	3144	3145	3146	3147	3148	3
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FEDERAL EMERGENCY MANAGEMENT AGENCY -- NATURAL RESOURCES DIVISION (NP-RP-NR)
1984 STOCKPILE GOALS STUDY -- WAR SCENARIO LAD3 (LAD3)
TOTAL OUTPUT IN MILLIONS OF 1972\$

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	2911	2912	2913	2914	2915	2916	2917	2918	2919	2920	2921	2922	2923	2924	2925	2926	2927	2928	2929	2930	2931	2932	2933	2934	2935	2936	2937	2938	2939	2940	2941	2942	2943	2944	2945	2946	2947	2948	2949	2950	2951	2952	2953	2954	2955	2956	2957	2958	2959	2960	2961	2962	2963	2964	2965	2966	2967	2968	2969	2970	2971	2972	2973	2974	2975	2976	2977	2978	2979	2980	2981	2982	2983	2984	2985	2986	2987	2988	2989	2990	2991	2992	2993	2994	2995	2996	2997	2998	2999	3000	3001	3002	3003	3004	3005	3006	3007	3008	3009	3010	3011	3012	3013	3014	3015	3016	3017	3018	3019	3020	3021	3022	3023	3024	3025	3026	3027	3028	3029	3030	3031	3032	3033	3034	3035	3036	3037	3038	3039	3040	3041	3042	3043	3044	3045	3046	3047	3048	3049	3050	3051	3052	3053	3054	3055	3056	3057	3058	3059	3060	3061	3062	3063	3064	3065	3066	3067	3068	3069	3070	3071	3072	3073	3074	3075	3076	3077	3078	3079	3080	3081	3082	3083	3084	3085	3086	3087	3088	3089	3090	3091	3092	3093	3094	3095	3096	3097	3098	3099	3100	3101	3102	3103	3104	3105	3106	3107	3108	3109	3110	3111	3112	3113	3114	3115	3116	3117	3118	3119	3120	3121	3122	3123	3124	3125	3126	3127	3128	3129	3130	3131	3132	3133	3134	3135	3136	3137	3138	3139	3140	3141	3142	3143	3144	3145	3146	3147	3148	3149	3150	3151	3152	3153	3154	3155	3156	3157	3158	3159	3160	3161	3162	3163	3164	3165	3166	3167	3168	3169	3170	3171	3172	3173	3174	3175	3176	3177	3178	3179	3180	3181	3182	3183	3184	3185	3186	3187	3188	3189	3190	3191	3192	3193	3194	3195	3196	3197	3198	3199	3200	3201	3202	3203	3204	3205	3206	3207	3208	3209	3210	3211	3212	3213	3214	3215	3216	3217	3218	3219	3220	3221	3222	3223	3224	3225	3226	3227	3228	3229	3230	3231	3232	3233	3234	3235	3236	3237	3238	3239	3240	3241	3242	3243	3244	3245	3246	3247	3248	3249	3250	3251	3252	3253	3254	3255	3256	3257	3258	3259	3260	3261	3262	3263	3264	3265	3266	3267	3268	3269	3270	3271	3272	3273	3274	3275	3276	3277	3278	3279	3280	3281	3282	3283	3284	3285	3286	3287	3288	3289	3290	3291	3292	3293	3294	3295	3296	3297	3298	3299	3300	3301	3302	3303	3304	3305	3306	3307	3308	3309	3310	3311	3312	3313	3314	3315	3316	3317	3318	3319	3320	3321	3322	3323	3324	3325	3326	3327	3328	3329	3330	333
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DATE 05/29/84, TIME 8-

FOR OFFICIAL USE ONLY

FEDERAL EMERGENCY MANAGEMENT AGENCY - NATURAL RESOURCES DIVISION (NP-RF-NR)
1984 STOCKPILE GOALS STUDY - WAG SCENARIO LAD3 (LAD3)
TOTAL OUTPUT IN MILLIONS OF 1972\$

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	2911	2912	2913	2914	2915	2916	2917	2918	2919	2920	2921	2922	2923	2924	2925	2926	2927	2928	2929	2930	2931	2932	2933	2934	2935	2936	2937	2938	2939	2940	2941	2942	2943	2944	2945	2946	2947	2948	2949	2950	2951	2952	2953	2954	2955	2956	2957	2958	2959	2960	2961	2962	2963	2964	2965	2966	2967	2968	2969	2970	2971	2972	2973	2974	2975	2976	2977	2978	2979	2980	2981	2982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FOR OFFICIAL USE ONLY

FEDERAL ENERGY MANAGEMENT AGENCY -- NATURAL RESOURCES DIVISION (NF-RP-NR)
1984 STOCKPILE GOALS STUDY -- WAR SCENARIO LAGO (LAW3)
TOTAL OUTPUT IN MILLIONS OF 1972\$

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	DEIMS	DEIMS	DEIMS	DEIMS	DEIMS	DEIMS	DEIMS	DEIMS	DEIMS	DEIMS	DEIMS	DEIMS	DEIMS	DEIMS
	POD	POD	POD	POD	POD	POD	POD	POD	POD	POD	POD	POD	POD	POD
58011 STORAGE BATTERIES	64.	125.	164.	177.	960.	833.	834.	902.						
58012 PRIMARY BATTERIES	45.	82.	109.	110.	335.	180.	181.	193.						
58020 INT. COMBUST. ENGINE EQ.	154.	341.	454.	502.	1568.	617.	611.	692.						
58031 X-RAY APPARATUS	39.	75.	103.	112.	12.	-20.	-21.	-18.						
58032 ELECT. MACHINERY EQUIPMENT	41.	81.	106.	115.	315.	98.	92.	128.						
59010 TRUCK TRAILERS	123.	279.	373.	334.	354.	-186.	-187.	-95.						
59020 MOTOR VEHICLES	2164.	6057.	7579.	7958.	31570.	-1562.	-1594.	-465.						
59030 MOTOR VEHICLE PARTS	975.	2423.	3035.	3231.	16393.	6300.	6501.	7712.						
60010 AIRCRAFT	6789.	14825.	23370.	27639.	3478.	1153.	1454.	-609.						
60020 AIRCRAFT, ENGINES & PARTS	3489.	6775.	9751.	11335.	1380.	557.	567.	69.						
60030 AIRCRAFT & EQUIPMENT, NEC	3929.	7518.	10377.	12722.	1713.	775.	809.	227.						
61010 SHIP BUILDING & REPAIR	9234.	14863.	18277.	20368.	256.	-80.	-290.	-386.						
61021 RAILROAD EQUIPMENT	31.	60.	84.	94.	820.	578.	541.	559.						
61022 TRAVEL TRAILERS	3.	5.	9.	9.	4057.	2291.	1522.	1537.						
61023 OTHER TRANSP. EQUIPMENT	57.	102.	138.	154.	2723.	-202.	-218.	-7.						
62011 ENGIN., LAB., SCIENT. EQ.	1084.	1862.	2385.	2699.	304.	182.	157.	136.						
62012 NON-ELECT. CONTR. INSTRUM.	1378.	2557.	3409.	3891.	1524.	964.	870.	839.						
62021 MEDICAL INSTRUMENTS	390.	642.	658.	967.	1522.	1376.	1349.	1384.						
62022 DENTAL EQUIPMENT	28.	51.	63.	73.	257.	247.	248.	259.						
62030 WATCHES & CLOCKS	150.	267.	353.	403.	323.	-632.	-768.	-761.						
63010 OPTICAL INSTRUMENTS	644.	1169.	1602.	1815.	-49.	-126.	-328.	-439.						
63020 OPTIC/MIC GOODS	36.	53.	77.	86.	468.	545.	409.	340.						
63030 PHOTOGRAPHIC EQUIPMENT	317.	553.	753.	659.	3652.	2732.	2556.	2628.						
64001 JEWELERS' FINDINGS	20.	37.	50.	57.	920.	54.	39.	43.						
64002 MISC. MANUFACTURING	232.	385.	506.	577.	12222.	7917.	7774.	8454.						
65010 RAILROADS & SERVICES	1329.	2571.	3476.	3945.	12939.	9941.	5941.	10525.						
65020 MOTOR TRANSP. & WAREHSE.	2184.	3663.	4825.	5479.	26450.	22457.	22603.	23725.						
65030 WATER TRANSP. & SERVICES	1084.	1396.	1728.	1952.	-1648.	-7249.	-7702.	-7427.						
65040 AIR TRANSP. & SERVICES	1613.	2549.	3354.	3828.	10732.	8436.	8416.	9042.						
65050 OTHER TRANSP. & SERVICES	215.	313.	388.	438.	6577.	7327.	7915.	8235.						
66000 COMMUNICATIONS	2859.	4857.	6458.	7556.	39606.	38593.	39456.	41270.						
67000 RADIO & TV BROADCASTING	0.	0.	0.	0.	4790.	3792.	3825.	3997.						
68010 ELECTRIC SERVICE UTILITIES	2115.	3859.	5022.	5624.	31307.	29703.	30270.	31679.						
68020 GAS PRODUCTS & SERVICES	662.	1248.	1628.	1788.	10938.	18346.	18794.	19626.						
68030 WATER, SANITARY SERVICES	271.	474.	609.	636.	7907.	2812.	2883.	3005.						
69010 WHOLESALE TRADE	5357.	10370.	14040.	15954.	97144.	77087.	77704.	81559.						
69020 RETAIL TRADE	352.	596.	776.	881.	130403.	97537.	99048.	104917.						
70000 FINANCE & INSURANCE	1866.	3509.	4763.	5495.	90993.	89079.	91041.	95333.						
71001 OWNER-OCCUPIED DWELLINGS	0.	0.	0.	0.	12163.	126158.	129945.	136023.						
71002 REAL ESTATE	3757.	6810.	8789.	10231.	112082.	108623.	109464.	114374.						

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FEDERAL EMERGENCY MANAGEMENT AGENCY - NATURAL RESOURCES DIVISION (NF-RP-NR)
1984 STOCKPILE GOALS STUDY - WAR SCENARIO LADA (LAD3)
TOTAL OUTPUT IN MILLIONS OF 1972*

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
ITEMS														
DOD														
72010 HOTELS & LODGING PLACES	680.	1350.	1753.	2002.	9319.	8966.	9207.	9585.						
72620 PERSONAL & MISC. REPAIR	422.	729.	948.	1069.	22482.	22341.	22811.	23887.						
73000 MISC. BUS. & PROF. SERV.	10661.	19015.	25203.	28917.	64986.	57272.	57745.	60042.						
74000 EAT & DRINK PLACES	2058.	3807.	5131.	5854.	56834.	58059.	59848.	63408.						
75000 AUTO REPAIR & SERVICES	879.	1562.	2059.	2356.	27782.	26732.	27361.	28658.						
76000 MOTION PICTURES	378.	601.	782.	887.	16606.	16903.	17567.	18379.						
77010 MEDICAL & HEALTH SERVICES	415.	500.	580.	660.	02070.	84125.	85231.	89799.						
77021 EDUCATIONAL SERVICES	461.	569.	663.	756.	13722.	14021.	14371.	15082.						
77022 NONPROFIT ORGANIZATIONS	1226.	1780.	2216.	2561.	21403.	21587.	22149.	23239.						
78000 FEDERAL GOVT. ENTERPRISES	566.	923.	1189.	1350.	12770.	11876.	12131.	12684.						
79000 ST. & LOCAL GOVT. ENTERP.	46.	67.	117.	133.	13393.	12361.	12604.	13275.						
80000 NONCOMPARABLE IMPORTS	0.	0.	0.	0.	0.	0.	0.	0.						
81000 SCRAP, USED GOODS	7.	9.	11.	13.	4927.	1210.	1070.	1130.						
82010 FED. GOVT. COMPENSATION	31690.	36930.	47992.	55039.	24500.	21000.	19000.	18000.						
82020 ST. & LOCAL GOVT. COMPENS.	0.	0.	0.	0.	139656.	134530.	134431.	131294.						
83000 REST OF WORLD INDUSTRY	0.	0.	0.	0.	12753.	6855.	9137.	10513.						
84000 HOUSEHOLD INDUSTRY	0.	0.	0.	0.	3300.	3400.	3500.	3600.						
TOTAL	205878.	376558.	501958.	569957.	2043456.	1762480.	1771478.	1851191.						

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FEDERAL EMERGENCY MANAGEMENT AGENCY - NATURAL RESOURCES DIVISION (NF-RP-NR)
1984 STOCKPILE GOALS STUDY - WAR SCENARIO LAD3 (LAD3)
TOTAL OUTPUT IN MILLIONS OF 1972\$

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	TOTALS	TOTALS	TOTALS
BASIC																				
INDUSTRIAL																				
01000 LIVESTOCK PRODUCTS	494.	152.	156.	156.	141.	49082.	52056.	53901.	57312.											
02000 CROPS & AGRIC. PRODUCTS	517.	163.	164.	164.	150.	41076.	44373.	46173.	48350.											
03000 FORESTRY & FISH PRODUCTS	213.	72.	71.	71.	64.	2953.	2908.	3114.	3376.											
04000 AGRIC., FOREST., FISH SERV.	119.	37.	37.	37.	34.	4435.	4537.	4699.	4965.											
05000 IRON & FERROALLOY MINING	814.	397.	405.	405.	346.	1575.	1301.	1522.	1660.											
06000 COOPER ORE MINING	985.	293.	287.	287.	256.	1461.	952.	997.	1094.											
06010 NON-FERROUS ORES	545.	180.	181.	181.	163.	74.	93.	93.	168.											
07000 COAL MINING	757.	332.	339.	339.	292.	6512.	6020.	6402.	6810.											
08000 CRUDE PETRO. & NATURAL GAS	1786.	909.	926.	926.	776.	14172.	13907.	15437.	15973.											
09000 STONE & CLAY MINING	509.	224.	215.	215.	180.	1225.	1160.	1244.	1275.											
10000 CHEM. & FERT. MINERAL MFG.	115.	49.	50.	50.	44.	918.	780.	809.	848.											
11010 RESID. HOMES CONSTRUCTION	0.	0.	0.	0.	0.	27059.	16042.	110030.	10023.											
11021 RESID. APARTMENT CONSTR.	0.	0.	0.	0.	0.	10298.	5393.	3391.	3381.											
11022 NEW RESID. ALTERATIONS	0.	0.	0.	0.	0.	9047.	5052.	3052.	3052.											
11023 HOTEL, MOTEL CONSTRUCTION	0.	0.	0.	0.	0.	100.	114.	118.	132.											
11030 INDUS. BLDG. CONSTRUCTION	7301.	4410.	4513.	4513.	4253.	7564.	4617.	4782.	4532.											
11041 OFFICE BLDG. CONSTRUCTION	13700.	2030.	2030.	2030.	2030.	14053.	2240.	2193.	2163.											
11042 WAREHOUSE, GARAGE CONSTR.	139.	175.	207.	207.	182.	217.	306.	374.	391.											
11043 HOSPITAL CONSTRUCTION	2750.	360.	360.	360.	360.	3215.	780.	753.	763.											
11044 RELIG., EDUC. CONSTRUCTION	0.	0.	0.	0.	0.	1863.	1326.	984.	786.											
11051 TELEPHONE CONSTRUCTION	2750.	360.	360.	360.	360.	2752.	383.	384.	385.											
11052 RAILROAD CONSTRUCTION	0.	0.	0.	0.	0.	13.	33.	40.	46.											
11053 ELECT. UTIL. CONSTRUCTION	5500.	3500.	2000.	2000.	1500.	5851.	3909.	2266.	1749.											
11054 GAS UTILITY CONSTRUCTION	1500.	1500.	1000.	1000.	500.	1511.	1508.	1006.	504.											
11055 PETRO. PIPELINE CONSTR.	200.	200.	200.	200.	200.	200.	200.	200.	200.											
11056 SANITARY SYSTEMS CONSTRUCTION	0.	0.	0.	0.	0.	1211.	902.	677.	551.											
11057 LOCAL TRANSIT CONSTRUCTION	0.	0.	0.	0.	0.	143.	102.	73.	55.											
11060 HIGHWAY CONSTRUCTION	0.	0.	0.	0.	0.	1781.	1243.	948.	775.											
11070 MILIT. FACIL. CONSTRUCTION	29.	18.	30.	30.	33.	453.	561.	634.	687.											
11081 OIL & GAS FIELD SERVICE	8573.	10333.	11237.	11237.	8703.	8573.	10333.	11239.	8680.											
11082 OTHER NON-BLDG. CONSTR.	1464.	1359.	1415.	1415.	1068.	3092.	2093.	2082.	1686.											
12010 RESIDENTIAL M & R	307.	57.	55.	55.	67.	15073.	15336.	15749.	16467.											
12020 NON-RESIDENTIAL M & R	1094.	422.	433.	433.	380.	11554.	9547.	9525.	9765.											
12031 TELEPHONE M & R	191.	45.	45.	45.	43.	1375.	1199.	1225.	1277.											
12032 RAILROAD M & R	326.	136.	137.	137.	121.	1972.	1401.	1402.	1460.											
12033 ELECTRIC UTILITIES M & R	103.	37.	36.	36.	34.	1668.	1517.	1546.	1613.											
12034 GAS UTILITIES M & R	31.	12.	13.	13.	11.	423.	320.	400.	413.											
12035 PETROLEUM PIPELINE M & R	6.	3.	3.	3.	3.	101.	87.	89.	91.											
12036 SANITARY SYSTEMS M & R	133.	48.	49.	49.	43.	2353.	2105.	2147.	2252.											
12037 LOCAL TRANSIT M & R	3.	3.	3.	3.	3.	164.	143.	149.	156.											

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FEDERAL EFFICIENCY MANAGEMENT AGENCY -- NATURAL RESOURCES DIVISION (NR-FP-NR)
1984 STOCKPILE GOALS STUDY -- WAR SCENARIO LAGO (LAGE)
TOTAL OUTPUT IN MILLIONS OF 1972\$

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
BASIC														
INDUSTRIAL														
12040 HIGHWAY M & R	8.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
12050 MILITARY FACILITIES M & R	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
12060 OIL & GAS WELL M & R	66.	34.	34.	34.	34.	34.	34.	34.	34.	34.	34.	34.	34.	34.
12061 OIL & GAS WELL M & R	40.	13.	13.	13.	13.	13.	13.	13.	13.	13.	13.	13.	13.	13.
12062 CONSERVATION, DEVEL. M & R	300.	65.	65.	65.	65.	65.	65.	65.	65.	65.	65.	65.	65.	65.
13010 GUIDED MISSILES	5.	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.
13020 TANKS COMPONENTS	60.	27.	27.	27.	27.	27.	27.	27.	27.	27.	27.	27.	27.	27.
13030 AMMUNITION	6.	4.	4.	4.	4.	4.	4.	4.	4.	4.	4.	4.	4.	4.
13032 SMALL ARMS AMMUNITION	10.	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.	3.
13041 SMALL ARMS	27.	17.	17.	17.	17.	17.	17.	17.	17.	17.	17.	17.	17.	17.
13042 OTHER ORDNANCE	386.	117.	117.	117.	117.	117.	117.	117.	117.	117.	117.	117.	117.	117.
14011 MEAT PRODUCTS	108.	39.	39.	39.	39.	39.	39.	39.	39.	39.	39.	39.	39.	39.
14012 DAIRY PRODUCTS	107.	34.	34.	34.	34.	34.	34.	34.	34.	34.	34.	34.	34.	34.
14013 CANNED, PRESERVED FRUITS	132.	42.	42.	42.	42.	42.	42.	42.	42.	42.	42.	42.	42.	42.
14014 GRAIN MILL PRODUCTS	63.	19.	19.	19.	19.	19.	19.	19.	19.	19.	19.	19.	19.	19.
14015 BAKERY PRODUCTS	76.	24.	24.	24.	24.	24.	24.	24.	24.	24.	24.	24.	24.	24.
14016 CONFECTIONERY PRODUCTS	49.	15.	15.	15.	15.	15.	15.	15.	15.	15.	15.	15.	15.	15.
14017 SOFT DRINKS	120.	46.	46.	46.	46.	46.	46.	46.	46.	46.	46.	46.	46.	46.
14018 FATS & OILS	54.	17.	17.	17.	17.	17.	17.	17.	17.	17.	17.	17.	17.	17.
14019 MISC. FOOD PREPARATIONS	252.	77.	77.	77.	77.	77.	77.	77.	77.	77.	77.	77.	77.	77.
14020 ALCOHOLIC BEVERAGES	39.	12.	12.	12.	12.	12.	12.	12.	12.	12.	12.	12.	12.	12.
15000 TOBACCO MANUFACTURING	1400.	377.	377.	377.	377.	377.	377.	377.	377.	377.	377.	377.	377.	377.
16000 FABRIC & YARN	975.	195.	195.	195.	195.	195.	195.	195.	195.	195.	195.	195.	195.	195.
17010 FLOOR COVERINGS	22.	7.	7.	7.	7.	7.	7.	7.	7.	7.	7.	7.	7.	7.
17021 CORRUG & TWINE	413.	129.	129.	129.	129.	129.	129.	129.	129.	129.	129.	129.	129.	129.
17022 MISC. TEXTILE GOODS	253.	79.	79.	79.	79.	79.	79.	79.	79.	79.	79.	79.	79.	79.
18000 APPAREL	463.	163.	163.	163.	163.	163.	163.	163.	163.	163.	163.	163.	163.	163.
19000 MISC. TEXTILE PRODUCTS	1411.	484.	484.	484.	484.	484.	484.	484.	484.	484.	484.	484.	484.	484.
20001 LOGGING CAMPS	198.	54.	54.	54.	54.	54.	54.	54.	54.	54.	54.	54.	54.	54.
20002 MILLWORK	906.	324.	324.	324.	324.	324.	324.	324.	324.	324.	324.	324.	324.	324.
20003 VENEER & PLYWOOD	81.	27.	27.	27.	27.	27.	27.	27.	27.	27.	27.	27.	27.	27.
21000 WOODEN CONTAINERS	690.	149.	149.	149.	149.	149.	149.	149.	149.	149.	149.	149.	149.	149.
22000 HOUSEHOLD FURNITURE	2842.	692.	692.	692.	692.	692.	692.	692.	692.	692.	692.	692.	692.	692.
23000 OTHER FURNITURE	789.	250.	250.	250.	250.	250.	250.	250.	250.	250.	250.	250.	250.	250.
24010 PAPER MILLS	575.	160.	160.	160.	160.	160.	160.	160.	160.	160.	160.	160.	160.	160.
24020 PAPERBOARD MILLS	1003.	277.	277.	277.	277.	277.	277.	277.	277.	277.	277.	277.	277.	277.
24030 BUILDING PAPER	953.	293.	293.	293.	293.	293.	293.	293.	293.	293.	293.	293.	293.	293.
25000 PAPERBOARD CONTAINERS	2456.	845.	845.	845.	845.	845.	845.	845.	845.	845.	845.	845.	845.	845.
26000 PRINTING & PUBLISHING	2574.	1025.	1025.	1025.	1025.	1025.	1025.	1025.	1025.	1025.	1025.	1025.	1025.	1025.
27010 INDUSTRIAL CHEMICALS	60.	29.	29.	29.	29.	29.	29.	29.	29.	29.	29.	29.	29.	29.
27021 FERTILIZERS														

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FEDERAL EMERGENCY MANAGEMENT AGENCY - NATURAL RESOURCES DIVISION (NP-RP-NR)
1984 STOCKPILE GOALS STUDY - WAR SCENARIO LAD3 (LAD3)
TOTAL OUTPUT IN MILLIONS OF 1972\$

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	TOTALS
BASIC	37.	15.	15.	13.	1118.	1114.	1161.	5974.	6815.						
INDUSTRIAL	370.	170.	175.	149.	3112.	4395.	5974.	2334.	2450.						
INDUSTRIAL: BASIC	445.	257.	273.	225.	2450.	2145.	2334.	4701.	5045.						
INDUSTRIAL: INDUSTRIAL	672.	272.	275.	250.	5500.	4304.	4701.	1036.	1101.						
27022 AGRICULTURAL CHEMICALS	177.	66.	67.	60.	1237.	1001.	1036.	5059.	5303.						
27031 MISC. CHEMICALS	377.	107.	109.	103.	5518.	4914.	5059.	9312.	9779.						
27032 CHEMICAL PREPARATIONS	64.	22.	23.	21.	9208.	9069.	9312.	5559.	5904.						
28010 PLASTICS MATERIALS	152.	59.	61.	53.	5396.	5355.	5559.	4556.							
28020 SYNTHETIC RUBBER	27.	9.	9.	8.	4054.	4145.	4305.	3196.							
28030 MANMADE FIBERS	655.	240.	240.	217.	3859.	2922.	3037.	25094.							
29010 DRUGS	2417.	1146.	1146.	958.	28569.	24056.	24546.	967.							
29021 CLEANING PREPARATIONS	222.	91.	85.	72.	1309.	1025.	967.	6770.							
29022 TOILET PREPARATIONS	806.	368.	376.	341.	7424.	6497.	6770.	802.							
30000 PAINTS & LACQUERS	225.	98.	102.	89.	1038.	776.	802.	844.							
31010 PETROLEUM REFINING	2773.	825.	842.	774.	16239.	12313.	13348.	14326.							
31020 PAVING MIXTURES	21.	6.	6.	5.	1431.	1552.	1645.	1764.							
32010 TIRES	34.	10.	10.	9.	6066.	6849.	7282.	7813.							
32020 RUBBER & BELTING	826.	268.	268.	254.	3801.	1601.	1755.	1698.							
32030 MISC. RUBBER	30.	12.	12.	11.	2365.	2364.	2466.	2607.							
33000 LEATHER TANNING	535.	360.	370.	295.	1267.	867.	782.	720.							
34000 FOOTWEAR	65.	34.	33.	30.	316.	233.	227.	229.							
35010 GLASS PRODUCTS	63.	24.	23.	21.	340.	174.	119.	117.							
35020 GLASS CONTAINERS	30.	6.	6.	5.	92.	20.	-10.	-9.							
36010 CEMENT, HYDRAULIC	30.	6.	6.	5.	149.	119.	113.	119.							
36020 CLAY REFRACTORIES	17.	6.	6.	5.	708.	128.	105.	120.							
36031 BRICK & CLAY TILE	218.	68.	69.	58.	4302.	2794.	2245.	2204.							
36032 CERAMIC WALL TILE	1381.	473.	416.	358.	4302.	2794.	2245.	2204.							
36033 STRUCTURAL CLAY PRODUCTS	60.	15.	15.	14.	236.	164.	148.	157.							
36041 POTTERY	260.	124.	130.	113.	943.	693.	783.	841.							
36042 CONCRETE & GYPSUM	185.	74.	75.	58.	608.	453.	455.	480.							
36050 LUT STONE	158.	90.	93.	67.	392.	307.	320.	327.							
36061 ABRASIVE PRODUCTS	141.	57.	57.	50.	726.	559.	625.	662.							
36062 ASBESTOS PRODUCTS	420.	210.	213.	185.	1033.	656.	637.	629.							
36070 NONCLAY REFRACTORIES	76.	24.	25.	23.	241.	185.	186.	207.							
36081 GASSET DEVICES	11314.	5575.	5604.	4843.	25390.	18570.	20861.	22075.							
36082 MINERAL WOOL	223.	152.	142.	122.	524.	33.	435.	472.							
36083 NONMETAL MINERAL PRODUCTS	403.	155.	144.	135.	1044.	500.	476.	487.							
37010 BLAST FURNACES	774.	387.	370.	330.	1437.	671.	653.	636.							
37020 ELECTROMETALLURG. PRODUCTS	601.	293.	260.	254.	1106.	500.	462.	448.							
37031 STEEL WIRE	2051.	811.	728.	615.	4542.	3211.	3424.	3572.							
37032 COLD STEEL FINISHING	500.	220.	262.	210.	1530.	1000.	1506.	1620.							
37033 STEEL PIPE & TUBES															
37040 IRON & STEEL FOUNDRIES															
37050 IRON & STEEL FORGINGS															

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FEDERAL EMERGENCY MANAGEMENT AGENCY
1984 STOCKPILE GOALS STUDY -- NATURAL RESOURCES DIVISION (NF-RP-NR)
TOTAL OUTPUT IN MILLIONS OF 1974\$

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	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	TOTALS
BASIC															
INDUSTRIAL: INDUSTRIAL: INDUSTRIAL: INDUSTRIAL:															
47021 POWER HAND TOOLS	390.	130.	134.	113.	743.	327.	392.	416.							
47022 ROLLING MILL MACHINERY	274.	241.	267.	174.	365.	280.	293.	204.							
47023 METAL WORK MACHINERY	395.	241.	265.	203.	631.	734.	961.	1006.							
48001 WOODWORK MACHINERY	338.	134.	114.	75.	478.	160.	145.	117.							
48022 TEXTILE PRODUCTS MACHINERY	595.	97.	99.	97.	903.	333.	321.	354.							
48023 PAPER INDUSTRY MACHINERY	740.	110.	111.	110.	612.	14.	40.	187.							
48024 PRINTING TRADES MACHINERY	253.	44.	45.	43.	446.	187.	187.	187.							
49010 SPECIAL INDUSTRY MACHINERY	470.	82.	84.	61.	751.	291.	297.	300.							
49020 PUMPS & COMPRESSORS	1879.	552.	634.	621.	2510.	1356.	1473.	1605.							
49030 ROLLER BEARINGS	1409.	591.	624.	523.	2856.	1955.	2136.	2222.							
49041 INDUSTRIAL FURNACES	624.	174.	194.	146.	501.	261.	297.	1414.							
49042 BLOWERS & FANS	354.	143.	159.	136.	758.	431.	460.	481.							
49043 INDUSTRIAL PATTERNS	427.	294.	312.	276.	1662.	140.	155.	166.							
49044 POWER TRANSMISSION EQUIP.	80.	291.	320.	270.	1190.	1267.	1437.	1546.							
50000 MISC. MACHINERY, EXC. EL.	692.	33.	34.	30.	210.	768.	904.	934.							
51010 CALCULATING MACHINES	605.	291.	312.	276.	1662.	140.	155.	166.							
51020 TYPEWRITERS	1537.	815.	845.	1576.	5458.	4345.	5565.	6104.							
52010 REFRIGERATION	25103.	3761.	3901.	3791.	39673.	24388.	29532.	32149.							
52020 SERVICE INDUSTRY MACHINERY	3664.	797.	770.	8791.	4480.	3793.	1277.	1253.							
53010 ELECT. MEAS. INSTRUMENTS	2058.	569.	587.	543.	6977.	617.	3627.	3974.							
53020 POWER, DISTR. TRANSFORMERS	1045.	212.	221.	204.	1520.	7743.	10144.	11205.							
53030 SWITCHGEAR APPARATUS	1495.	831.	1027.	860.	5559.	616.	677.	646.							
53040 MOTORS & GENERATORS	1405.	346.	353.	323.	1705.	990.	1018.	1016.							
53050 INDUSTRIAL CONTROLS	1463.	498.	522.	445.	2056.	2004.	2276.	2441.							
53061 ELECT. WELDING APPARATUS	1332.	457.	497.	432.	3029.	1266.	1468.	1586.							
53062 GRAPHITE PRODUCTS	1060.	333.	359.	312.	1956.	2004.	2276.	2441.							
53063 ELECT. INDUS. APPARATUS	491.	201.	203.	171.	819.	519.	560.	570.							
54000 HOUSEHOLD APPLIANCES	143.	56.	58.	51.	391.	289.	339.	368.							
55010 ELECTRIC LAMPS	479.	149.	159.	136.	681.	357.	400.	411.							
55020 LIGHTING FIXTURES & EQUIP.	1602.	383.	385.	377.	7503.	2009.	2106.	2629.							
55030 WIRING DEVICES	733.	55.	55.	50.	1130.	877.	913.	985.							
56010 RADIO & TV SETS	966.	285.	257.	233.	2316.	730.	667.	700.							
56020 PHONOGRAPH RECORDS	486.	166.	169.	165.	2424.	1477.	1650.	1765.							
56030 TELEGRAPH APPARATUS	4.	1.	1.	1.	5671.	-2924.	-2781.	-2645.							
57010 RADIO & TV EQUIPMENT	6539.	1297.	1307.	1295.	1085.	41.	43.	44.							
57020 SEMICONDUCTORS	4288.	1469.	1683.	1502.	6021.	2906.	3300.	3548.							
57030 ELECTRONIC COMPONENTS, NEC	559.	130.	139.	130.	26148.	41345.	53755.	59218.							
	2417.	482.	514.	485.	2005.	407.	556.	609.							
	4199.	553.	913.	656.	10655.	14714.	19663.	22455.							
					11569.	17793.	14276.								

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FEDERAL EMERGENCY MANAGEMENT AGENCY -- NATURAL RESOURCES DIVISION (NP-RP-NR)
1984 STOCKPILE GOALS STUDY -- WAR SCENARIO LAD3 (LAD3)
TOTAL OUTPUT IN MILLIONS OF 1972\$

	1983	1984	1985	1986	1983	1984	1985	1986
BASIC	BASIC	BASIC	BASIC	BASIC	TOTALS	TOTALS	TOTALS	TOTALS
INDUSTRIAL	INDUSTRIAL	INDUSTRIAL	INDUSTRIAL	INDUSTRIAL	INDUSTRIAL	INDUSTRIAL	INDUSTRIAL	INDUSTRIAL
58011 STORAGE BATTERIES	309.	116.	127.	119.	1333.	1073.	1125.	1198.
58012 PRIMARY BATTERIES	16.	5.	5.	5.	397.	267.	295.	316.
58020 INT. COMBUST. ENGINE EQ.	592.	211.	215.	205.	2314.	1168.	1280.	1400.
58031 X-RAY APPARATUS	661.	222.	230.	222.	711.	277.	323.	323.
58032 ELECT. MACHINERY EQUIPMENT	135.	47.	47.	41.	492.	226.	245.	284.
59010 TRUCK TRAILERS	1781.	1390.	1396.	1383.	2258.	1430.	1532.	1673.
59020 MOTOR VEHICLES	16450.	5985.	6024.	5941.	50184.	10480.	12002.	13434.
59030 MOTOR VEHICLE PARTS	15162.	1964.	1985.	1915.	22470.	10687.	11620.	12858.
60010 AIRCRAFT	2357.	387.	418.	412.	12624.	16365.	24242.	27492.
60020 AIRCRAFT, ENGINES & PARTS	503.	117.	122.	115.	5372.	7449.	10282.	11518.
60030 AIRCRAFT & EQUIPMENT, NEC	521.	113.	121.	114.	6164.	8407.	11565.	13063.
61010 SHIP BUILDING & REPAIR	930.	181.	179.	162.	10420.	14966.	18166.	20344.
61021 RAILROAD EQUIPMENT	1162.	230.	233.	220.	2013.	868.	858.	873.
61022 TRAVEL TRAILERS	72.	29.	29.	29.	4132.	2326.	1561.	1575.
61023 OTHER TRANSP. EQUIPMENT	507.	104.	105.	98.	3287.	4.	25.	245.
62011 ENGIN., LAB., SCIENT. EQ.	446.	145.	156.	142.	1834.	2139.	2697.	2966.
62012 NON-ELECT. CONTR. INSTRUM.	1010.	373.	361.	324.	4012.	3894.	4640.	5054.
62021 MEDICAL INSTRUMENTS	716.	223.	228.	217.	2628.	2240.	2435.	2568.
62022 DENTAL EQUIPMENT	143.	39.	39.	39.	427.	337.	395.	371.
62030 WATCHES & CLOCKS	271.	70.	72.	67.	744.	-295.	-358.	-291.*
63010 OPTICAL INSTRUMENTS	383.	214.	230.	196.	978.	1257.	1505.	1572.
63020 PHOTOGRAPHIC GOODS	45.	18.	20.	18.	550.	621.	505.	443.
63030 PHOTOGRAPHIC EQUIPMENT	1816.	734.	797.	722.	5784.	4020.	4106.	4209.
64001 JEWELERS' FINDINGS	11.	11.	12.	11.	979.	102.	101.	111.
64002 MISC. MANUFACTURING	1744.	353.	357.	336.	14199.	8655.	8837.	9368.
65010 RAILROADS & SERVICES	2565.	1068.	1081.	954.	16833.	13581.	14497.	15424.
65020 MOTOR TRANSP. & WAREHSE.	4079.	1483.	1490.	1332.	32713.	27603.	28917.	30536.
65030 WATER TRANSP. & SERVICES	516.	246.	249.	211.	-48.	-5607.	-5725.	-5264.*
65040 AIR TRANSP. & SERVICES	1631.	479.	488.	442.	13975.	11464.	12258.	13313.
65050 OTHER TRANSP. & SERVICES	739.	259.	263.	233.	9531.	8401.	8967.	8906.
66000 COMMUNICATIONS	6386.	1506.	1520.	1450.	48851.	44955.	47434.	50276.
67000 RADIO & TV BROADCASTING	576.	210.	213.	187.	4866.	4002.	4038.	4185.
68010 ELECTRIC SERVICE UTILITIES	2087.	758.	774.	688.	35509.	34321.	36066.	37991.
68020 GAS PRODUCTS & SERVICES	1513.	603.	614.	538.	21112.	20198.	21036.	21952.
69010 WHOLESALE TRADE	166.	58.	59.	52.	3346.	3344.	3551.	3743.
69020 RETAIL TRADE	19163.	5991.	6014.	5525.	121664.	93448.	97758.	103037.
70000 FINANCE & INSURANCE	4206.	1290.	1264.	1201.	136961.	99423.	101088.	106998.
71001 OWNER-OCCUPIED DWELLINGS	3424.	1199.	1222.	1082.	96282.	93737.	97026.	101970.
71002 REAL ESTATE	0.	0.	0.	0.	122168.	126168.	129946.	136023.
	6395.	2008.	2047.	1837.	122235.	117641.	120501.	126442.

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FEDERAL AGENCY MANAGEMENT AGENCY -- NATURAL RESOURCES DIVISION (NP-RP-NR)
1994 STOCKPILE GOODS STUDY -- BGR SCENARIO (LAD) (LAD3)
TOTAL OUTPUT IN MILLIONS OF 1972\$

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
BASIC	690.	213.	219.	199.	10869.	10528.	11179.	11786.										
INDUSTRIAL	960.	271.	282.	256.	23341.	23341.	24041.	25211.										
	8859.	3239.	3273.	2833.	84506.	79526.	86222.	92142.										
	2442.	739.	760.	685.	62605.	62605.	65739.	67947.										
	1657.	701.	718.	622.	30316.	23796.	130138.	31538.										
	328.	114.	116.	102.	17311.	17613.	18464.	19368.										
	9.	3.	3.	3.	82494.	84629.	86815.	90462.										
	70.	23.	24.	21.	14252.	14613.	15058.	15359.										
	426.	136.	140.	126.	23055.	23503.	24505.	25926.										
	734.	245.	251.	226.	14069.	13045.	13571.	14259.										
	807.	292.	296.	263.	14246.	12740.	13017.	13671.										
	0.	0.	0.	0.	0.	0.	0.	0.										
	-3304.	-190.	-183.	-243.	1630.	1029.	893.	901.										
	0.	0.	0.	0.	56190.	59330.	66992.	73039.										
	0.	0.	0.	0.	139456.	134530.	134431.	131294.										
	0.	0.	0.	0.	12756.	6856.	9137.	10513.										
	0.	0.	0.	0.	3300.	3400.	3500.	3500.										
TOTAL	325505.	120585.	122014.	108088.	2574839.	2259623.	2395450.	2529236.										

*In a few of the 257 industries the total gross output estimates were negative. This result occurs because assumed imports exceed domestic consumption. This (impossible) result occurs because the level of detail on imports used to drive the I-O model is less than the gross industry output estimates. For example, imports of photographic apparatus, optical goods and watches are one aggregate input (See Appendix B -- STIPS Tables). The FEMA model holds the import mix of the three goods constant. With the import mix held constant, imports of watches exceed essential domestic consumption. There is no way to reduce watch imports without proportionately reducing the other two components. These technical errors can be eliminated by setting all negative gross output values to zero prior to calculating the essential materials consumption.

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FEDERAL EMERGENCY MANAGEMENT AGENCY -- NATURAL RESOURCES DIVISION (NRP-RD-NR)
1984 STOCKPILE GOALS STUDY -- WAR SCENARIO LADS (LADS)
1984 - 1986 TOTAL OUTPUT IN MILLIONS OF 1972\$ FOR NONESSENTIAL CIVILIAN TIER

	1984	:	1985	:	1986	:
1000 LIVESTOCK PRODUCTS	2209.		2852.		2566.	
2000 CROPS & AGRIC. PRODUCTS	4390.		5346.		5012.	
3000 FORESTRY & FISH PRODUCTS	468.		543.		533.	
4000 AGRIC., FORES., FISH SERV.	311.		369.		350.	
5000 IRON & FERROALLOY MINING	697.		849.		764.	
6010 COPPER ORE MINING	862.		993.		941.	
6020 NONFERROUS ORES	461.		526.		502.	
7000 COAL MINING	889.		1041.		920.	
8000 CRUDE PETRO. & NATURAL GAS	1845.		2041.		2003.	
9000 STONE & CLAY MINING	677.		550.		540.	
00000 CHEM. & FERT. MINERAL MNG.	152.		175.		167.	
1010 RESID. HOMES CONSTRUCTION						
1021 RESID. APARTMENT CONSTR.						
1022 NEW RESID. ALTERATIONS						
1023 HOTEL, MOTEL CONSTRUCTION						
1030 INDUS. BLDG. CONSTRUCTION	8000.		8516.		8516.	
1041 OFFICE BLDG. CONSTRUCTION	15000.		15968.		15968.	
1042 WAREHSE., GARAGE CONSTR.						
1043 HOSPITAL CONSTRUCTION	2600.		2768.		2768.	
1044 RELIG., EDUC. CONSTRUCTION						
1051 TELEPHONE CONSTRUCTION	2700.		2874.		2874.	
1052 RAILROAD CONSTRUCTION						
1053 ELECT. UTIL. CONSTRUCTION	2000.		2129.		2129.	
1054 GAS UTILITY CONSTRUCTION						
1055 PETRO. PIPELINE CONSTR.						
1056 SANITARY SYSTEMS CONSTR.						
1057 LOCAL TRANSIT CONSTRUCTION						
11060 HIGHWAY CONSTRUCTION						
11070 MILIT. FACIL. CONSTRUCTION						
11081 OIL & GAS FIELD SERVICE	700.		745.		745.	
11082 OTHER NON-BLDG. CONSTR.	469.		511.		503.	
12010 RESIDENTIAL M & R	1409.		1568.		1533.	
12020 NON-RESIDENTIAL M & R	145.		157.		155.	
12031 TELEPHONE M & R	404.		465.		442.	
12032 RAILROAD M & R	143.		153.		156.	
12033 ELECTRIC UTILITIES M & R	39.		43.		42.	
12034 GAS UTILITIES M & R	10.		11.		10.	
12035 PETROLEUM PIPELINE M & R	196.		215.		213.	
12036 SANITARY SYSTEMS M & R	14.		15.		15.	
12037 LOCAL TRANSIT M & R						

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FEDERAL EMERGENCY MANAGEMENT AGENCY -- NATURAL RESOURCES DIVISION (NP-RP-NR)
1984 STOCKPILE GOALS STUDY -- WAR SCENARIO LAD3 (LAD3)
1984 - 1986 TOTAL OUTPUT IN MILLIONS OF 1972\$ FOR NONESSENTIAL CIVILIAN TIER

	1984	1985	1986
12040 HIGHWAY M & R	11.	13.	12.
12050 MILITARY FACILITIES M & R			
12061 OIL & GAS WELL M & R	68.	76.	74.
12062 CONSERVATION, DEVEL. M & R	70.	76.	76.
13010 GUIDED MISSILES	166.	173.	168.
13020 TANKS COMPONENTS	3.	-6.	-6.
13031 AMMUNITION	45.	65.	62.
13032 SMALL ARMS AMMUNITION	7.	26.	24.
13041 SMALL ARMS	347.	365.	390.
13042 OTHER ORDNANCE	13.	34.	31.
14011 MEAT PRODUCTS	1181.	1536.	1393.
14012 DAIRY PRODUCTS	266.	352.	316.
14013 CANNED, PRESERVED FRUITS	359.	495.	437.
14014 GRAIN MILL PRODUCTS	750.	1039.	911.
14015 BAKERY PRODUCTS	92.	110.	104.
14016 CONFECTIONERY PRODUCTS	219.	295.	262.
14017 SOFT DRINKS	134.	181.	161.
14018 FATS & OILS	558.	770.	679.
14019 MISC. FOOD PREPARATIONS	210.	293.	257.
14020 ALCOHOLIC BEVERAGES	431.	643.	582.
15000 TOBACCO MANUFACTURING	-135.	-1.	9.
16000 FABRIC & YARN	3920.	4874.	4590.
17010 FLOOR COVERINGS	2003.	2184.	2260.
17021 CORDAGE & TWINE	66.	78.	76.
17022 MISC. TEXTILE GOODS	898.	1044.	1015.
18000 APPAREL	1793.	2730.	2017.
19000 MISC. TEXTILE PRODUCTS	1053.	1190.	1147.
20001 LOGGING CAMPS	3014.	3456.	3417.
20002 MILLWORK	323.	413.	388.
20003 VENEER & PLYWOOD	1909.	2125.	2135.
21000 WOODEN CONTAINERS	118.	136.	133.
22000 HOUSEHOLD FURNITURE	6881.	7368.	7665.
23000 OTHER FURNITURE	2878.	3117.	3051.
24010 PAPER MILLS	1500.	1667.	1637.
24020 PAPERBOARD MILLS	1046.	1177.	1153.
24030 BUILDING PAPER	1478.	1633.	1592.
25000 PAPERBOARD CONTAINERS	1708.	1937.	1899.
26000 PRINTING & PUBLISHING	5954.	6596.	6441.
27010 INDUSTRIAL CHEMICALS	3358.	3853.	3695.
27021 FERTILIZERS	328.	415.	387.

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FEDERAL EMERGENCY MANAGEMENT AGENCY -- NATURAL RESOURCES DIVISION (NP-RP-NR)
1984 STOCKPILE GOALS STUDY -- WAR SCENARIO LAD3 (LAD3)
1984 - 1986 TOTAL OUTPUT IN MILLIONS OF 1972\$ FOR NONESSENTIAL CIVILIAN TIER

	1984	1985	1986
27022 AGRICULTURAL CHEMICALS	114.	146.	136.
27031 MISC. CHEMICALS	473.	535.	512.
27032 CHEMICAL PREPARATIONS	395.	455.	433.
28010 PLASTICS MATERIALS	1423.	1613.	1578.
28020 SYNTHETIC RUBBER	275.	298.	285.
28030 MANMADE FIBERS	905.	1097.	1051.
29010 DRUGS	198.	297.	263.
29021 CLEANING PREPARATIONS	283.	354.	329.
29022 TOILET PREPARATIONS	77.	103.	94.
30000 PAINTS & LACQUERS	872.	1027.	967.
31010 PETROLEUM REFINING	2712.	3029.	2912.
31020 PAVING MIXTURES	209.	218.	219.
32010 TIRES	1002.	1213.	1114.
32020 RUBBER & BELTING	220.	258.	245.
32030 MISC. RUBBER	4613.	5224.	5138.
33000 LEATHER TANNING	310.	419.	327.
34000 FOOTWEAR	469.	686.	530.
35010 GLASS PRODUCTS	2029.	2038.	2058.
35020 GLASS CONTAINERS	116.	182.	169.
36010 CEMENT, HYDRAULIC	393.	349.	340.
36020 CLAY REFRACTORIES	74.	76.	74.
36031 BRICK & CLAY TILE	99.	92.	91.
36032 CERAMIC WALL TILE	47.	39.	37.
36033 STRUCTURAL CLAY PRODUCTS	25.	19.	18.
36041 POTTERY	598.	586.	610.
36042 CONCRETE & GYPSUM	1437.	1404.	1384.
36050 CUT STONE	86.	79.	77.
36061 ABRASIVE PRODUCTS	315.	332.	324.
36062 ASBESTOS PRODUCTS	235.	206.	194.
36070 NONCLAY REFRACTORIES	184.	190.	188.
36081 GASKET DEVICES	186.	179.	171.
36082 MINERAL WOOL	424.	427.	421.
36083 NONMETAL MINERAL PRODUCTS	126.	130.	131.
37010 BLAST FURNACES	9601.	11373.	10552.
37020 ELECTROMETALLURG. PRODUCTS	251.	297.	276.
37031 STEEL WIRE	465.	543.	510.
37032 COLD STEEL FINISHING	655.	793.	722.
37033 STEEL PIPE & TUBES	516.	641.	570.
37040 IRON & STEEL FOUNDRIES	1628.	1863.	1755.
37050 IRON & STEEL FORGINGS	397.	450.	427.

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FEDERAL EMERGENCY MANAGEMENT AGENCY -- NATURAL RESOURCES DIVISION (NP-RP-NR)
1984 STOCKPILE GOALS STUDY -- WAR SCENARIO LAD3 (LAD3)
1984 - 1986 TOTAL OUTPUT IN MILLIONS OF 1972\$ FOR NONESSENTIAL CIVILIAN TIER

	1984	1985	1986
337061 METAL HEAT TREATING	173.	196.	187.
337062 PRIMARY METAL PRODUCTS	112.	126.	122.
38010 PRIMARY COPPER	1672.	1922.	1825.
38020 PRIMARY ALUMINUM PRODUCTS	1092.	1239.	1211.
38031 PRIMARY LEAD	236.	284.	259.
38032 PRIMARY ZINC	244.	287.	269.
38033 PRIMARY NONFERROUS METALS	293.	335.	321.
38040 COPPER ROLLING	1413.	1578.	1534.
38050 ALUMINUM ROLLING	1631.	1838.	1803.
38060 NONFERROUS METALS--R & D	610.	684.	665.
38070 DRAWING NONFERROUS WIRE	2389.	2706.	2605.
38080 ALUMINUM FOUNDRIES	527.	589.	570.
38090 COPPER ALLOY FOUNDRIES	169.	191.	183.
38100 NONFERROUS FOUNDRIES, NEC	243.	277.	267.
38110 NONFERROUS FORGINGS	54.	60.	57.
38120 SECOND. NONFERROUS METALS	1071.	1248.	1180.
39011 METAL CANS	304.	419.	379.
39012 METAL BARRELS	83.	99.	94.
40010 HEATING EQUIPMENT	575.	648.	646.
40020 FABRICATED METAL PRODUCTS	5301.	5825.	5769.
41010 SCREW MACHINE PRODUCTS	1338.	1509.	1461.
41020 METAL STAMPINGS	3531.	3899.	3861.
42010 HAND TOOLS & SAWS	594.	651.	661.
42020 CUTLERY & HARDWARE	1486.	1678.	1649.
42030 COATING ENGRAVING	1007.	1119.	1093.
42040 STEEL SPRINGS	138.	153.	148.
42050 PIPE, VALVES & FITTINGS	1585.	1754.	1711.
42061 MISC. FABR. WIRE PRODUCTS	589.	653.	646.
42062 METAL FOIL PRODUCTS	789.	892.	870.
43010 STEAM, GAS TURBINES	650.	701.	681.
43020 INTERNAL COMBUST. ENGINES	1157.	1236.	1221.
44000 FARM GARDEN EQUIPMENT	1985.	2200.	2073.
45010 CONSTRUCTION MACHINERY	502.	641.	533.
45020 MINING MACHINERY & EQUIP.	69.	79.	72.
45030 OIL FIELD MACHINERY	98.	124.	106.
46001 ELEVATORS & ESCALATORS	891.	957.	938.
46002 INDUSTRIAL TRUCKS	427.	460.	446.
47011 METAL CUTTING TOOLS	115.	130.	122.
47012 METAL FARM TOOLS	56.	63.	60.
47013 SPECIAL DIES & TOOLS	772.	864.	833.

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FEDERAL EMERGENCY MANAGEMENT AGENCY -- NATURAL RESOURCES DIVISION (NP-RP-NR)
1984 STOCKPILE GOALS STUDY -- WAR SCENARIO LAD3 (LAD3)
1984 - 1986 TOTAL OUTPUT IN MILLIONS OF 1972* FOR NONESSENTIAL CIVILIAN TIER

	1984	1985	1986
47021 POWER HAND TOOLS	230.	241.	251.
47022 ROLLING MILL MACHINERY	25.	29.	27.
47023 METAL WORK MACHINERY	35.	39.	37.
48010 WOODWORK MACHINERY	179.	190.	190.
48021 FOOD PRODUCTS MACHINERY	259.	280.	270.
48022 TEXTILE MACHINERY	346.	378.	365.
48023 PAPER INDUSTRY MACHINERY	120.	130.	126.
48024 PRINTING TRADES MACHINERY	225.	242.	236.
48030 SPECIAL INDUSTRY MACHINERY	658.	719.	690.
49010 PUMPS & COMPRESSORS	760.	850.	804.
49020 ROLLER BEARINGS	481.	542.	517.
49030 INDUSTRIAL FURNACES	191.	207.	202.
49041 BLOWERS & FANS	313.	342.	333.
49042 INDUSTRIAL PATTERNS	65.	73.	70.
49043 POWER TRANSMISSION EQUIP.	510.	564.	545.
49044 GENERAL INDUSTRY MACHINERY	439.	474.	462.
50000 MISC. MACHINERY, EXC. EL.	1327.	1499.	1433.
51010 CALCULATING MACHINES	23979.	25745.	25054.
51020 TYPEWRITERS	3633.	3894.	3810.
52010 REFRIGERATION	2897.	3226.	3139.
52020 SERVICE INDUSTRY MACHINERY	939.	1018.	986.
53010 ELECT. MEAS. INSTRUMENTS	830.	894.	866.
53020 POWER, DISTR. TRANSFORMERS	1005.	1098.	1064.
53030 SWITCHGEAR APPARATUS	1093.	1224.	1173.
53040 MOTORS & GENERATORS	1211.	1347.	1311.
53050 INDUSTRIAL CONTROLS	891.	1011.	965.
53061 ELECT. WELDING APPARATUS	299.	332.	319.
53062 GRAPHITE PRODUCTS	138.	153.	150.
53063 ELECT. INDUS. APPARATUS	362.	400.	386.
54000 HOUSEHOLD APPLIANCES	5111.	5749.	5811.
55010 ELECTRIC LAMPS	175.	264.	228.
55020 LIGHTING FIXTURES & EQUIP.	1208.	1457.	1393.
55030 WIRING DEVICES	1002.	1184.	1127.
56010 RADIO & TV SETS	9147.	9736.	10223.
56020 PHONOGRAPH RECORDS	932.	959.	1030.
56030 TELEGRAPH APPARATUS	3992.	4570.	4466.
56040 RADIO & TV EQUIPMENT	2435.	2622.	2574.
57010 ELECTRON TUBES	1784.	1901.	1969.
57020 SEMICONDUCTORS	2352.	2538.	2500.
57030 ELECTRONIC COMPONENTS, NEC	5283.	5661.	5675.

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FEDERAL EMERGENCY MANAGEMENT AGENCY -- NATURAL RESOURCES DIVISION (NP-RP-NR)
 1984 STOCKPILE GOALS STUDY -- WAR SCENARIO LAD3 (LAD3)
 1984 - 1986 TOTAL OUTPUT IN MILLIONS OF 1972\$ FOR NONESSENTIAL CIVILIAN TIER

	1984	1985	1986
58011 STORAGE BATTERIES	313.	376.	337.
58012 PRIMARY BATTERIES	168.	189.	187.
58020 INT. COMBUST. ENGINE EQ.	696.	837.	767.
58031 X-RAY APPARATUS	541.	606.	571.
58032 ELECT. MACHINERY EQUIPMENT	299.	341.	333.
59010 TRUCK TRAILERS	701.	842.	782.
59020 MOTOR VEHICLES	17520.	18810.	18553.
59030 MOTOR VEHICLE PARTS	6242.	7369.	6775.
60010 AIRCRAFT	655.	686.	676.
60020 AIRCRAFT, ENGINES & PARTS	260.	300.	273.
60030 AIRCRAFT & EQUIPMENT, NEC	236.	263.	251.
61010 SHIP BUILDING & REPAIR	852.	961.	941.
61021 RAILROAD EQUIPMENT	155.	177.	169.
61022 TRAVEL TRAILERS	1693.	1798.	1879.
61023 OTHER TRANSP. EQUIPMENT	3527.	3625.	3847.
62011 ENGIN., LAB., SCIENT. EQ.	145.	156.	151.
62012 NON-ELECT. CONTR. INSTRUM.	633.	684.	673.
62021 MEDICAL INSTRUMENTS	304.	323.	310.
62022 DENTAL EQUIPMENT	56.	58.	54.
62030 WATCHES & CLOCKS	1152.	1199.	1254.
63010 OPTICAL INSTRUMENTS	134.	141.	136.
63020 OPHTHALMIC GOODS	37.	42.	31.
63030 PHOTOGRAPHIC EQUIPMENT	1280.	1343.	1368.
64001 JEWELERS' FINDINGS	814.	860.	902.
64002 MISC. MANUFACTURING	5129.	5552.	5653.
65010 RAILROADS & SERVICES	3176.	3661.	3479.
65020 MOTOR TRANSP. & WAREHSE.	5334.	5933.	5798.
65030 WATER TRANSP. & SERVICES	650.	750.	715.
65040 AIR TRANSP. & SERVICES	1914.	2106.	2065.
65050 OTHER TRANSP. & SERVICES	881.	983.	958.
66000 COMMUNICATIONS	4860.	5269.	5179.
67000 RADIO & TV BROADCASTING	738.	605.	800.
68010 ELECTRIC SERVICE UTILITIES	2873.	3166.	3125.
68020 GAS PRODUCTS & SERVICES	1889.	2109.	2050.
68030 WATER, SANITARY SERVICES	218.	243.	238.
69010 WHOLESALE TRADE	24517.	26915.	26477.
69020 RETAIL TRADE	31533.	32283.	34500.
70000 FINANCE & INSURANCE	4675.	5112.	5060.
71001 OWNER-OCCUPIED DWELLINGS	9679.	10563.	10502.
71002 REAL ESTATE			

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FEDERAL EMERGENCY MANAGEMENT AGENCY -- NATURAL RESOURCES DIVISION (NP-RP-NR)
1984 STOCKPILE GOALS STUDY -- WAR SCENARIO LAD3 (LAD3)
1984 - 1986 TOTAL OUTPUT IN MILLIONS OF 1972\$ FOR NONESSENTIAL CIVILIAN TIER

	1984	1985	1986
0 HOTELS & LODGING PLACES	805.	889.	873.
10 PERSONAL & MISC. REPAIR	1614.	1729.	1729.
20 MISC. BUS. & PROF. SERV.	11354.	12395.	12317.
30 EAT & DRINK PLACES	2718.	2975.	2928.
40 AUTO REPAIR & SERVICES	2028.	2234.	2198.
50 MOTION PICTURES	352.	383.	369.
60 MEDICAL & HEALTH SERVICES	21.	25.	23.
70 EDUCATIONAL SERVICES	96.	106.	105.
80 NONPROFIT ORGANIZATIONS	547.	601.	594.
90 FEDERAL GOVT. ENTERPRISES	1644.	1745.	1759.
100 ST. & LOCAL GOVT. ENTERP.	1198.	1314.	1304.
200 NONCOMPARABLE IMPORTS	-935.	-746.	-692.
300 SCRAP, USED GOODS			
400 FED. GOVT. COMPENSATION			
500 ST. & LOCAL GOVT. COMPENS.			
600 REST OF WORLD INDUSTRY			
700 HOUSEHOLD INDUSTRY			
TOTAL	397008.	438526.	431475.

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• In 1985, outlays are made for: 40% of 1985 expansions
40% of 1986 expansions

• In 1986, outlays are made for: 40% of 1986 expansions

Total annual investment outlays are shown in line (13) and converted to 1972 \$ in line (14):

	<u>1983</u>	(millions of 1972 \$) <u>1984</u>	<u>1985</u>	<u>1986</u>
Investment to Expand Capacity	1456	3069	3235	1868

The numbers shown need to be divided between the mining and processing industries and added to the normal levels of replacement investment. Those levels, based on Commerce data for 1975-80 are projected to be:

<u>Replacement Investment :</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Mining	305	305	305	305
Processing	200	200	200	200

With the investment to expand capacity divided according to historic levels and added to the replacement investment, the total gross program is:

<u>Total Gross Investment :</u>				
Mining	1179	2146	2246	1426
Processing	782	1428	1494	947

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APPENDIX B

Projections of Wartime Defense Industry Output Relative to Peacetime Levels

Ammunition and Other Ordnance outputs increase by over 800 percent by 1986 from prewar levels. Other defense industries increase output levels by lesser percentages. For example, the output levels of aircraft industries and the guided missiles industry increase by about 200 percent above prewar levels (see page 30).

The defense industry outputs were supplied by DOD and were derived by PA&E from the defense expenditure patterns provided by the Secretary of Defense. The data on past peak outputs were estimated by FEMA. Although the I-O Working Group has not evaluated these data, there appear to be four major reasons for these differences.

1. Aircraft and ammunition differ in that the reuse of aircraft is limited only by combat attrition whereas ammunition is used only once before being replaced. Consequently, in wartime the rate of increase in ammunition production should exceed the increase in aircraft production.
2. The aircraft industry includes civilian as well as military production. Civilian production, which in peacetime averages about 50% of the industry's output, is virtually eliminated during the scenario and the capacity is used to meet defense requirements. Consequently, military aircraft production is actually being increased to about 400% of previous peak levels. Since no comparable switching occurs in the ammunition industry, the percentage increase in ammunition production would be higher than that for aircraft.
3. The military aircraft would be augmented by use of existing civilian aircraft (CRAF) as needed for cargo, tanker, and troop transport requirements. Because of high petroleum prices, there would be sharply reduced civilian air travel.

4. The DEIMS model subdivides part of the output of the more complex industries (e.g., aircraft) into the industries that supply major components (e.g., electronics). The outputs of industries producing major systems will appear to be lower in this model than they would in other models. The previous peak output, against which the increase is compared, was estimated from data that did not subdivide industrial output. Therefore, the percentage increase in output for industries producing relatively complex products (e.g., the aircraft industry) will be understated because a portion of this output will be assigned to other industries (e.g., electronics and computers).

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FEDERAL EMERGENCY MANAGEMENT AGENCY - NATURAL RESOURCES DIVISION (NP-PP-NR)
1984 STOCKPILE GROSS STUDY - WAR SCENARIO LATE (L003)
PERSONAL CONSUMPTION EXPENDITURES (BILLIONS OF 1972\$)

	1983	1984	1985	1986
1 NEW CARS (65)	37500.	0.	0.	0.
2 USED CARS (66)	7200.	0.	0.	0.
3 OTHER MOTOR VEHICLES (67)	8000.	0.	0.	0.
4 PARTS & ACCESSORIES (68)	12100.	13000.	13000.	14000.
5 FURNITURE, INCL. MATTRESSES (29)	10800.	0.	0.	0.
6 FURNITURE & OTHER APPLIANCES (30)	11600.	2000.	2000.	3000.
7 CHINA, TABLEWARE & UTENSILS (31)	4200.	0.	0.	0.
8 RADIO, TV, RECORDS & MUSIC INSTRU. (87)	21000.	0.	0.	0.
9 OTHER DURABLE HOUSE FURNISHINGS (32)	11500.	0.	0.	0.
10 JEWELRY & WATCHES (18)	6700.	0.	0.	0.
11 RECREATION & CATHOPEDIC GOODS (46)	2600.	3000.	3000.	3000.
12 BOOKS & MAPS (83)	3500.	0.	0.	0.
13 WHEEL GOODS, TOYS, SPORTS EQUIP. (46)	3600.	0.	0.	0.
14 FOOD PURCH. FOR OFF-PREMISES (3)	12700.	13400.	13400.	148100.
15 PACKAGED MEALS (4)	4700.	42400.	51100.	54200.
16 FOOD FURNISHED EMPLOYEES INCL. MILITARY (5)	3100.	3400.	3400.	3500.
17 FOOD PRODUCED & CONSUMED ON FARMS (6)	500.	500.	500.	600.
18 COATS & OTHER FOOTWEAR (12)	11800.	12500.	12500.	13800.
19 WOMEN'S & CHILDREN'S CLOTHING (14)	47900.	50700.	52400.	55700.
20 MEN'S & BOYS' CLOTH'G ETC. MILITARY (15)	21400.	22700.	23000.	24900.
21 STANDARD MILITARY CLOTHING (16)	100.	100.	100.	100.
22 GASOLINE & OIL (70)	20400.	15400.	15400.	14700.
23 LUBR. OIL & COAL (40)	4000.	4000.	3000.	3000.
24 TOBACCO PRODUCTS (7)	15200.	13900.	14400.	15300.
25 TOILET ARTICLES & PREPARATIONS (21)	7700.	8100.	8100.	8700.
26 SEMI-DURABLE HOUSE FURNISHINGS (33)	5000.	5500.	5500.	6000.
27 CLEANING & POLISHING PREPARATIONS (34)	3000.	3500.	3500.	3700.
28 STATIONERY & WRITING SUPPLIES (25)	2000.	2000.	2000.	2200.
29 DRUG PREPARATIONS & SUPPLIES (45)	2800.	3000.	3000.	3200.
30 MAGAZINES, NEWSPAPERS, ETC. (84)	4300.	4600.	4600.	4900.
31 TOYS & SPORT SUPPLIES (53)	3000.	3200.	3200.	3400.
32 FLOWERS, SEEDS, & POTTED PLANTS (89)	2300.	2400.	2400.	2500.
33 H. & C. EXPENDITURES AMOUNT (105)	1500.	1600.	1600.	1700.
34 REMITTANCE IN FUND TO FOREIGNERS (107)	200.	200.	200.	200.

100,000 TO 100,000,000

FEDERAL EMERGENCY MANAGEMENT AGENCY - NATURAL RESOURCES DIVISION (UP-OF-NR)				
1994 STOCKPILE COMMODITY - HIGH ESTIMATED LOSS (0.002)				
PERSONAL CONSUMPTION EXPENDITURES (BILLIONS OF 1972\$)				
	1993	1994	1995	1996
35 UNEMPLOYED DWELLING RENT (24)	120700.	124200.	120000.	124400.
36 UNEMPLOYED DWELLING RENT (25)	42200.	42700.	42500.	47100.
37 RENTAL VALUE OF FARM DWELLINGS (26)	1700.	1700.	2000.	2100.
38 OTHER HOUSING (27)	4200.	5000.	5200.	5400.
39 ELECTRICITY (37)	19100.	19200.	19300.	20200.
40 GAS (38)	6500.	7000.	7000.	7000.
41 WATER & SANITARY SERVICES (39)	5100.	5200.	5400.	5600.
42 TELEPHONE & TELEGRAPH (41)	23400.	24200.	24300.	26100.
43 DOMESTIC SERVICES (42)	3300.	3400.	3500.	3600.
44 OTHER HOUSEHOLD OPERATIONS (43)	6500.	6800.	7000.	7300.
45 AUTO REPAIR, PARKING & RENTAL (49)	18100.	18700.	19300.	20200.
46 TRUCK, TUNNEL, FERRY, ROAD TOLLS (71)	500.	500.	500.	600.
47 RAIL - LOCAL & LONG DISTANCE (76.79)	400.	400.	400.	400.
48 AIRLINES (80)	5300.	5400.	5500.	5600.
49 OTHER (74-75, 79, 81)	4200.	4300.	4400.	4600.
50 PERSONAL & REPAIR SERV. (12, 17, 19, 22, 88)	10700.	11100.	11400.	11900.
51 HEALTH SERVICES (47-50)	73700.	76200.	76500.	82100.
52 LEGAL SERVICES (60)	8400.	8700.	9000.	9400.
53 INSURANCE & FINANC'L SERV. (51, 56-59, 72)	51500.	53200.	54600.	57400.
54 FUNERAL & BURIAL EXPENSES (61)	2700.	2800.	2900.	3000.
55 OTHER PERSONAL BUSINESS SERVICES (62)	3700.	3800.	3900.	4100.
56 TRAVEL, SPORTS, & RACES (91-93, 96)	4900.	5000.	5200.	5400.
57 CLUBS, FRAT'S, PARTIC. AMUSE. (94-95)	5400.	5500.	5700.	6000.
58 OTHER RECREATIONAL EXPENDITURES (97)	11200.	11600.	11900.	12500.
59 PRIVATE SCHOOLS & HIGHER EDU. (99-100)	11200.	11600.	11900.	12500.
60 OTHER PRIVATE EDU. & RESEARCH (101)	4000.	4100.	4300.	4400.
61 RELIGIOUS & WELFARE ACTIVITIES (102)	13600.	14000.	14400.	15100.
62 FOREIGN TRAVEL BY U. S. RESIDENTS (104)	7900.	8200.	8400.	8800.
63 EXPENDITURES BY FOREIGNERS (106)	7000.	7200.	7400.	7700.
TOTAL -- PERSONAL CONSUMPTION EXPENDITURES	951300.	970000.	983500.	1030300.

1994-1995-1996-1997-1998

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FEDERAL BUDGETARY MANAGEMENT SYSTEM - NATIONAL RESOURCES DIVISION (NFR-NR)
1964 SINGLE-STEP CONSTRUCTION AND EQUIPMENT (LAD-3)
11. INVESTMENT IN EQUIPMENT (MILLIONS OF 1972\$)

	1963	1964	1965	1966
1 ENGINES & TURBINES (5)				
2 TRACTORS (6)	920.	130.	130.	130.
3 AGRICULTURE MACHINERY EXC. TRACTORS (7)	920.	360.	360.	360.
4 CONSTRUCTION MACHINERY EXC. TRACTORS (8)	1830.	500.	500.	500.
5 MINING & OILFIELD MACHINERY (9)	2200.	1000.	1000.	1000.
6 METAL-WORKING MACHINERY (10)	3660.	2700.	2700.	2200.
7 SPECIAL INDUSTRY MACHINERY (11)	3660.	510.	510.	510.
8 GENERAL INDUSTRY MACHINERY (12)	3660.	510.	510.	510.
9 OFFICE, COMPUT'G & ACCOUNT'G MACH. (13)	23540.	3940.	3940.	3540.
10 SERVICE INDUSTRY MACHINERY (14)	2750.	380.	380.	300.
11 TRANSM., DISTRIB. & INDUS. APPAR. (16)	4530.	630.	630.	630.
12 COMMUNICATIONS EQUIPMENT (17)	13740.	2450.	2450.	2450.
13 ELECTRICAL EQUIPMENT NEC (18)	1930.	500.	500.	500.
14 TRUCKS, BUSES, & TRUCK TRAILERS (19)	6830.	6020.	6020.	6020.
15 PASSENGER CARS (20)	10000.	1400.	1400.	1400.
16 AIRCRAFT (21)	2200.	320.	320.	320.
17 SHIPS & BOATS (22)	920.	130.	130.	130.
18 RAILROAD EQUIPMENT (23)	820.	130.	130.	130.
19 FURNITURE & FIXTURES (3)	3660.	510.	510.	510.
20 FABRICATED METAL PRODUCTS (4)	2750.	580.	580.	580.
21 INSTRUMENTS (24)	3660.	1000.	1000.	1000.
22 MISCELLANEOUS EQUIPMENT (25)	3660.	510.	510.	510.
23 SCRAP (26)	0.	0.	0.	0.
24 RESIDENTIAL PDE (27)	2000.	400.	400.	400.
25 SINGLE & 2-4 UNIT HOUSES (28) (PT. 31, 36)	27000.	10000.	10000.	10000.
26 MULTI-UNIT (5 OR MORE) HOUSING (PT. 31)	10000.	3000.	3000.	3000.
27 MOBILE HOMES (32)	2000.	2000.	2000.	2000.
28 ALTERATIONS & ADDITIONS (33, 37)	5000.	3000.	3000.	3000.
29 NON-HOUSEKEEPING UNITS (34)	0.	0.	0.	0.
30 RESIDENTIAL REAL ESTATE COMMISSION (35)	2000.	3000.	3000.	3000.
31 NET PURCHASES OF USED STRUCTURES (39)	0.	0.	0.	0.
32 INDUSTRIAL (6)	7500.	750.	750.	750.
33 OFFICE BUILDINGS (PT. 7)	1000.	200.	200.	200.
34Wareh., Serv. Sta. & Oth. Bldg. (PT. 7)	0.	0.	0.	0.

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7. The following are the names of the persons who have been appointed to the various positions in the organization:

DATE 09/29/84, TIME

FEDERAL EMERGENCY MANAGEMENT AGENCY -- NATURAL RESOURCES DIVISION (NP-RD-NR)
1984 STOCKPILE GOALS STUDY - WAR SCENARIO LADS (LADS)
NET INVENTORY CHANGE EXPENDITURES (MILLIONS OF 1979\$)

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	1983	1984	1985	1986
1 TOTAL FARM	-3000.	0.	0.	0.
2 STONE, CLAY & GLASS PRODUCTS	0.	0.	0.	0.
3 STEEL MILL PRODUCTS	0.	0.	0.	0.
4 NON-FERROUS METAL PRODUCTS	0.	-1150.	-1150.	-1150.
5 FERTILIZERS & PESTICIDES	-1000.	-1150.	-1150.	-1150.
6 FERTILIZERS EXC. ELECTRICAL	-1000.	-1150.	-2300.	0.
7 MACHINERY EXC. ELECTRICAL	0.	0.	0.	-1150.
8 MACHINERY APPL. INCL. RADIO & TV	0.	-1150.	-1150.	-1150.
9 ALL OTHER ELECTRICAL	0.	-1150.	-1150.	-2300.
10 MOTOR VEHICLES & EQUIP.	0.	-1150.	-1150.	0.
11 AIRCRAFT & PARTS	0.	0.	0.	0.
12 OTHER TRANSPORT. EQUIP.	0.	0.	0.	0.
13 INSTRUM., PHOTO. & PRODUCTS	0.	0.	0.	0.
14 OTHER MECH. DURABLES	0.	0.	0.	0.
15 FOOD & KINDRED PRODUCTS	0.	0.	0.	0.
16 TOBACCO	0.	0.	0.	0.
17 TEXTILE MILL PRODUCTS	0.	0.	-150.	-150.
18 FIBER & ALLIED PRODUCTS	0.	-150.	-150.	-150.
19 CHEMICALS PRODUCTS	0.	-150.	0.	0.
20 PETROLEUM PRODUCTS	0.	-150.	0.	0.
21 RUBBER & PLASTIC PRODUCTS	0.	-150.	-150.	-150.
22 OTHER MECH. NONDURABLES	0.	-150.	-150.	-150.
23 MOTOR VEHICLES & EQUIPMENT	0.	-150.	-150.	0.
24 ELECTRICAL GOODS	0.	-150.	0.	-150.
25 FURNITURE, FLOORING, ETC., SUPPLIES	-1000.	-300.	-300.	-300.
26 NONFURNITURE EQUIPMENT, & SUPPLIES	0.	0.	-150.	-150.
27 METALS, EXCEPT SCRAP	0.	-450.	-300.	-150.
28 OTHER MECHANICAL DURABLE WHOLESALE	0.	-150.	-150.	-300.
29 NON-MECHANICAL DURABLE WHOLESALE	0.	0.	150.	0.
30 GROCERIES & RELATED PRODUCTS	0.	0.	0.	-150.
31 LIQUORS, BEER, ETC.	0.	-150.	0.	0.
32 DRUGS, CHEMICALS, CLEANING SUPPLIES	0.	0.	0.	150.
33 FARM PRODUCTS	0.	0.	0.	0.
34 FARM PRODUCTS	0.	0.	0.	0.
35 FISH & FISH PRODUCTS	0.	0.	0.	0.
36 OTHER MECHANICAL DURABLE WHOLESALE	0.	0.	0.	0.
37 OTHER MECHANICAL DURABLE WHOLESALE	0.	0.	0.	0.

TOTAL NET INVENTORY CHANGE EXPENDITURES

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FOR OFFICIAL USE ONLY					FEDERAL BUREAU OF INVESTIGATION (FBI-NR)	
					1984 STOCKPILE GOALS STUDY -- YEAR ESTIMATED LAST (LAPD)	
					CHILLIONS OF 1972\$	
					NET INVENTORY CHANGE EXPENDITURES	
					1983	1984
					1985	1986
37	FURNITURE & APPLIANCES				-150.	-150.
38	LUMBER, HARDWARE, FARM EQUIPMENT				-150.	-150.
39	AUTOS, PARTS, TIRES & ACCESSORIES				-450.	-300.
40	OTHER DURABLE GOODS RETAILERS				-150.	-150.
41	FOOD STORES				-200.	-150.
42	DEPARTMENT STORES				-200.	-450.
43	APPAREL				-150.	-150.
44	GENERAL MERCHANDISE & MAIL ORDER				-150.	0.
45	OTHER NONDURABLE GOODS RETAILERS				-300.	-300.
46	OTHER DURABLE GOODS INVENTORIES				-150.	-150.
47	OTHER NONDURABLE GOODS INVENTORIES				-450.	-450.
TOTAL -- NET INVENTORY CHANGE					-12700.	-12700.

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FEDERAL EMERGENCY MANAGEMENT AGENCY NATIONAL RESOURCES DIVISION (U.S. E.P. NR)
1984 SINGLE COMMODITY AND SECTORAL DATA (1984)
GROUPS EXPORTS CATEGORIES (COLLECTION OF 1984)

	1983	1984	1985	1986
1 UNMILLED GRAINS (041.042.1.043-45)	7035.	7502.	7731.	8037.
2 FRUITS & VEGETABLES (05)	1163.	354.	671.	697.
3 FIBER, MILLED PRODUCTS (08.042.2.046-48)	1883.	1771.	1852.	2177.
4 OTHER FOOD PRODUCTS & LIVE ANIMALS	1282.	1423.	1452.	1486.
5 BEVERAGES (11)	62.	71.	77.	75.
6 TOBACCO & TOBACCO WFS. (12)	1030.	702.	792.	629.
7 HIDE, SKINS, FURS-UNDRESSED (21)	297.	213.	218.	224.
8 OIL SEEDS, NUTS, & FLOUR THEREOF (22)	2279.	2033.	2190.	2414.
9 RUBBER, CRUDE INCL. SYNTHETIC (23)	297.	207.	205.	206.
10 WOOD, LUMBER, AND CORK (24)	1090.	760.	1002.	1207.
11 PULPS, AND WASTE PAPER (25)	694.	483.	479.	480.
12 TEXT. FIBERS EXC. COT. (26 EXC. 263.1)	595.	414.	411.	412.
13 RAW COTTON EXC. LINTERS (263.1)	1189.	829.	822.	823.
14 CRUDE FERTILIZERS & MINERALS (27)	634.	433.	479.	490.
15 METAL WFS & CONCENTR. (281.289.285-86)	495.	345.	308.	309.
16 METAL WFS & VEGETABLE MATERIALS (29)	326.	276.	274.	274.
17 COAL, COAL & BRIGNETS (32)	130.	136.	137.	137.
18 PETROLEUM & GAS (33.34)	1554.	1735.	1668.	2216.
19 FATS & OILS (SECT. 41 41-43)	555.	414.	411.	412.
20 CHEMICAL ELEMENTS, FERTIL., ETC. (51.52)	594.	193.	503.	523.
21 MEDICINALS & PHARMACEUTICAL PROD. (54)	275.	1329.	1834.	1887.
22 PLASTIC MAT'L, RESINS, ETC. (63)	1090.	730.	734.	755.
23 CATH. PROD., MAT'L'S NEC (52.53.55.57.59)	1296.	1390.	1390.	1392.
24 LEATHER, DRESSED FURS, ETC. (61)	1373.	1307.	1297.	1397.
25 RUBBER WFS. NEC (62)	146.	136.	137.	137.
26 WOOD & CORP. WFS. NEC (63)	146.	136.	137.	137.
27 PAPER & PRC. (64)	146.	136.	137.	137.
28 TEXTILE YARN FIBRILS & FIBRILS (65)	146.	136.	137.	137.
29 NONMETALLIC MINERAL WFS. NEC (67)	146.	136.	137.	137.
30 NONMETALLIC MINERAL WFS. NEC (67)	146.	136.	137.	137.
31 NONMETALLIC MINERAL WFS. NEC (67)	146.	136.	137.	137.
32 NONMETALLIC MINERAL WFS. NEC (67)	146.	136.	137.	137.
33 NONMETALLIC MINERAL WFS. NEC (67)	146.	136.	137.	137.

1984 COLLECTION OF DATA

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THE UNIVERSITY OF CHICAGO

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FEDERAL	AGENCY MONITORING AGENCY	NATIONAL ECONOMIC DEVELOPMENT	(NIP)-RE-NIP	
1984 STOCKHOLDERS' EQUITY	1984 STOCKHOLDERS' EQUITY	1984 STOCKHOLDERS' EQUITY	1984 STOCKHOLDERS' EQUITY	
1984 STOCKHOLDERS' EQUITY	1984 STOCKHOLDERS' EQUITY	1984 STOCKHOLDERS' EQUITY	1984 STOCKHOLDERS' EQUITY	
34 AIRCRAFT & PARTS (792)	5366.	2756.	1502.	702.
35 MOTOR VEHICLES & PARTS (7)	1765.11	1122.	591.	756.
36 OIL, TR. EQ. (791.3.51763)	404.	337.	283.	288.
37 ENGINE & TURBINES (71)	2306.	2348.	2320.	2333.
38 AGRICULTURAL MACH'Y. & EQ.	1090.	750.	751.	755.
39 OFFICE MACHINES & PARTS (7)	7531.	4724.	4163.	3650.
40 SPECIAL INDUSTRY MACHINERY	3300.	2340.	2320.	2333.
41 OIL, MACHINERY & PARTS NEC	5083.	3522.	2403.	3400.
42 TL. POWER MACH'Y & EQUIP. (1-73)	1130.	629.	629.	623.
43 TELECOMMUNICATIONS APPARATUS (76)	1684.	1174.	1164.	1166.
44 ELECTRIC HOUSEHOLD APPLIANCES (775)	396.	221.	164.	110.
45 TL. MACH'Y & APPAR. NEC (776.778)	2874.	1803.	1768.	1791.
46 HEATING, FURNITURE, CLOTHES (81-95)	1090.	694.	603.	528.
47 INSTR., OPT. GOODS, WATCHES (87.824-85)	2378.	1492.	1315.	1153.
48 PHOTO EQUIP. & SUPPL. (88 L. 85 834-85)	1090.	694.	603.	528.
49 OTHER MISC. MANU. ARTICLES NEC (89)	1982.	1243.	1025.	5814.
50 MILITARY ARMS & APPAREL (95)	1040.	725.	719.	720.
51 OTHER TRANSACTIONS NEC (93-94.96-97.99)	2264.	2416.	3653.	4423.
52 RE-EXPORTS	2828.	2918.	3181.	3255.
53 NET MILITARY GRANTS & SALES	7690.	15600.	13800.	11400.
54 POP. ADJUSTMENTS	4147.	4279.	4645.	4033.
55 TRANSPORTATION	6553.	6768.	7353.	7638.
56 TRAVEL, INVEST. INCOME, & GOV'T SERVICES	36793.	40059.	43529.	45215.
57 FEES, ROYALTIES, & OTHER PVT. SERVICES	5000.	6000.	7000.	7000.
TOTAL -- GROSS EXPORTS	151276.	136133.	139527.	139480.

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FEDERAL EMERGENCY MANAGEMENT AGENCY -- NATIONAL RESOURCES DIVISION (NF-EP-NR)
1984 STOCKPILE GOALS STUDY -- BASE SCENARIO LAOS (LAOS)
GROSS IMPORTS EXPENDITURES (BILLIONS OF 1972\$)

	1983	1984	1985	1986
1 FOOD & LIVE ANIMALS	5337.	5391.	2007.	2790.
2 BEVERAGES (11)	1201.	787.	683.	672.
3 TOBACCO & TOBACCO MANUFACTURES (12)	213.	131.	114.	112.
4 HIDES, FURTINGS, OIL SEEDS, NUTS (21-22)	213.	131.	114.	112.
5 RUBBER, CRUDE INCL. SYNTHETIC (23)	237.	190.	195.	192.
6 WOOD, LUMBER, CORK (24)	1174.	471.	269.	264.
7 PULP & WASTE PAPER (25)	640.	244.	146.	144.
8 TEXTILE FIBERS NOT MFD. INTO YARN (26)	213.	82.	49.	48.
9 CRUDE FERTILIZERS & MINERALS (27)	217.	164.	163.	160.
10 IRON ORES & SCRAP (281-82)	474.	361.	390.	384.
11 NON-FERROUS ORES & CONCENTRATES (283-88)	1007.	812.	878.	864.
12 ANIMAL & VEGETABLE MAT'L'S NEC (29)	237.	164.	164.	160.
13 COAL, CONC. & BRIQUETS (32)	549.	353.	164.	160.
14 CRUDE PETROLEUM (33)	6998.	4395.	357.	3303.
15 PETROLEUM PRODUCTS (334-35)	1305.	812.	76.	616.
16 GAS, NATURAL & MANUFACTURED (34)	712.	443.	342.	336.
17 OIL & FATS, ANIMAL & VEGETABLE (4)	237.	164.	153.	160.
18 CHEMICALS (51-59 EXC. 54, 58)	2609.	2165.	2147.	2111.
19 MEDICINAL & PHARM. PRODUCTS (54)	237.	164.	163.	160.
20 SYNTHETIC & PLASTIC MATERIALS (53)	356.	246.	244.	240.
21 LEATHER & LEATHER WFRS. NEC (61)	237.	164.	163.	160.
22 RUBBER WFRS.--FINISHED NEC (62)	237.	164.	163.	160.
23 WOOD & CORK MANUFACTURES NEC (63)	474.	262.	130.	123.
24 PAPER & WFRS. THEREOF (64)	1542.	853.	423.	416.
25 TEXTILE YARN, FABRICS & PROD. (65)	1305.	812.	805.	792.
26 GLASS & GLASSWARE (66-65)	356.	246.	244.	240.
27 NONMET. WFRS. EXC. GLASS (66 EXC. 664-65)	830.	689.	693.	672.
28 IRON & STEEL (67)	4637.	3243.	3714.	3455.
29 COPPER METAL (682)	783.	541.	586.	576.
30 ALUMINUM METAL (684)	1044.	722.	781.	763.
31 LEAD METAL (685)	130.	90.	89.	83.
32 ZINC METAL (686)	391.	271.	283.	264.
33 OTHER NONMETAL. METAL (68 EXC. 682, 684-67)	2348.	1624.	1757.	1727.
34 METAL MANUFACTURES NEC (69)	2479.	1714.	1854.	1823.
35 MACH. EXC. EL. (71 LESS 716, 741 LESS 747)	597.	741.	244.	250.

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FOR OFFICIAL USE ONLY					NATURAL RESOURCES DIVISION (NE-RF NR)				
FEDERAL EMERGENCY MANAGEMENT AGENCY - 1984 STOCKPILE GOALS STUDY - WART SCENARIO LOAD (LARD)					1984 STOCKPILE GOALS STUDY - WART SCENARIO LOAD (LARD)				
GROSS INVENTORY EXPENDITURES (BILLIONS OF 1972\$)					GROSS INVENTORY EXPENDITURES (BILLIONS OF 1972\$)				
	1983	1984	1985	1986		1983	1984	1985	1986
6 AGRICULTURAL MACH'Y & PARTS (721, 722.4)	593.	410.	407.	400.					
7 OFFICE MACHINES & PARTS (75)	2372.	1640.	1627.	1599.					
8 METALWORKING MACHINERY (73)	913.	1091.	1196.	1209.					
9 SPEC. INDUS. MACH'Y (72 LESS 721, 722.4)	1826.	1378.	1366.	1344.					
10 ELEC. PUR. & DISTR. EQUIP. (716, 771-73)	1435.	1003.	1074.	1056.					
11 TELECOMMUNICATIONS APPAR. & PARTS (76)	7436.	5610.	5563.	5470.					
12 ELEC. HOUSEHOLD APPLIANCES (747, 775)	712.	394.	195.	192.					
13 MEDICAL APPL. & PARTS NEC (774, 776, 778)	2728.	2075.	2058.	2023.					
14 RAIL, SHIPS, BOATS (791, 793, 799)	119.	90.	93.	96.					
15 ROAD MOTOR VEHICLES & PARTS NEC (76)	13258.	5708.	5661.	5711.					
16 AIRCRAFT, SPACECRAFT & PARTS (792)	1305.	902.	895.	880.					
17 FURNITURE (82)	119.	82.	81.	80.					
18 TRAVEL & OTHER PERSONAL GOODS (83)	830.	344.	223.	224.					
19 CLOTHING EXCL. FOOTWEAR (84)	474.	197.	130.	120.					
20 FOOTWEAR EXCL. ORTHOPEDIC (85)	4863.	2690.	2001.	1967.					
21 SCIENTIFIC INSTRUMENTS (87)	1305.	722.	537.	528.					
22 FISHING APPAR., OPTICAL GOODS, WATCHES (88)	949.	787.	911.	896.					
23 PRINTED MATTER (892)	2372.	1968.	2277.	2232.					
24 RUBBER & PLASTIC MFRS. NEC (891)	237.	164.	163.	160.					
25 FERRY STROLLERS, WHEELCHAIRS (894)	474.	328.	325.	320.					
26 OFFICE & STATIONERY SUPPLIES NEC (895)	1044.	722.	716.	704.					
27 JEWELRY, CANDLES, ETC. NEC (896-99)	996.	689.	683.	672.					
30 OFFICIAL TRANSACTIONS NEC (93)	1898.	1312.	1301.	1289.					
31 ANIMS. ANIMALS NEC, BOLD, ETC. (9 ETC. 93)	500.	451.	2953.	4550.					
32 POP ADJ. TO CENSUS - VIRGIN ISLANDS	0.	0.	0.	0.					
33 POP ADJ. TO CENSUS - GOLD	438.	501.	791.	599.					
34 POP ADJ. TO CENSUS - ELECTRICAL ENERGY	325.	334.	394.	399.					
35 POP ADJ. TO CENSUS - OTHER (NET)	439.	501.	591.	599.					
36 EST. ADJ. FOR FOOD & PETROLEUM	1139.	1170.	1379.	1337.					
37 EST. TRANSPORTATION SERVICES	19309.	23783.	25159.	25492.					
38 EST. RIE FOREIGN TRAVEL	6306.	8276.	8776.	8804.					
39 EST. INSURANCE SERVICES	1703.	2212.	2340.	2371.					
40 OTHER (RESIDUAL VALUE)	21000.	28000.	29000.	29000.					
TOTAL -- GROSS IMPORTS	143437.	124566.	127931.	127454.					

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FEDERAL EMERGENCY MANAGEMENT AGENCY - NATURAL RESOURCES DIVISION (NP-RD-NR)
1984 STOCKPILE GOALS STUDY - WAR SCENARIO LADS (LADS)
NRI DEFENSE FEDERAL GOVERNMENT EXPENDITURES (BILLIONS OF 1972\$)

	1983	1984	1985	1986
1 NON-DEFENSE COMPENSATION	24500.	21000.	19000.	18000.
2 NON-DEFENSE STRUCTURES	2000.	500.	500.	500.
3 NASA RESEARCH & DEVELOPMENT	2000.	1000.	1000.	1000.
4 NASA, OTHER EXC. COMP. & CONSTRUCTION	0.	0.	0.	0.
5 NON-DEFENSE ATOMIC ENERGY ACTIVITIES	500.	500.	500.	500.
6 OTHER NONDEFENSE, EXC. CCC	0.	0.	0.	0.
7 CCC DONATIONS	0.	0.	0.	0.
8 CCC PURCHASES OF GOODS & SERVICES	0.	0.	0.	0.
9 OPERATIONS & MAINTENANCE-NORMAL	0.	0.	0.	0.
10 P.O.L.	0.	0.	0.	0.
11 MILITARY PERSONNEL	0.	0.	0.	0.
12 NONMILITARY PERSONNEL	0.	0.	0.	0.
13 RESEARCH & DEVELOPMENT	0.	0.	0.	0.
14 MILITARY CONSTRUCTION	0.	0.	0.	0.
15 FAMILY HOUSING	0.	0.	0.	0.
16 AIRCRAFT	0.	0.	0.	0.
17 MISSILES	0.	0.	0.	0.
18 SHIPS	0.	0.	0.	0.
19 ELECTRONICS & COMMUNICATIONS	0.	0.	0.	0.
20 AMMUNITION	0.	0.	0.	0.
21 VEHICLES & RELATED EQUIPMENT	0.	0.	0.	0.
22 OTHER SUPPORT EQUIPMENT	0.	0.	0.	0.
23 DOE DEFENSE (ATOMIC ENERGY)	0.	0.	0.	0.
24 STOCKPILE (FERROUS METALS)	0.	0.	0.	0.
25 STOCKPILE (FOOD & IMPORTS)	0.	0.	0.	0.
26 STOCKPILE (NON-FERROUS METALS)	0.	0.	0.	0.
27 STOCKPILE (TRADE MARGINS)	0.	0.	0.	0.
28 ALL OTHER NATIONAL DEFENSE	0.	0.	0.	0.
TOTAL - FEDERAL GOVERNMENT	24500.	21000.	19000.	18000.

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FEDERAL EMERGENCY MANAGEMENT AGENCY - NATIONAL EMERGENCIES DIVISION (NF-EP-NR)
1984 STATE FILE GOAL'S STUDY - MAJOR REVENUE GOALS (LARD)
STATE & LOCAL GOVERNMENT EXPENDITURES (MILLIONS OF 1972\$)

	1983	1984	1985	1986
1 EDUCATIONAL COMPENSATION	77003.	74181.	74127.	72397.
2 EDUCATIONAL STRUCTURES	1173.	435.	526.	451.
3 EDUCATIONAL OTHER	7953.	7157.	6739.	6454.
4 HEALTH & HOSPITAL COMPENSATION	13374.	12383.	12874.	12573.
5 HEALTH & HOSPITAL STRUCTURES	302.	215.	153.	116.
6 HEALTH & HOSPITAL OTHER	2536.	3176.	2920.	2364.
7 PUBLIC ASSIST. & RELATED COMPENSATION	6617.	6374.	6369.	6221.
8 PUBLIC ASSIST. & RELATED STRUCTURES	201.	143.	102.	77.
9 PUBLIC ASSIST. & RELATED OTHER	6082.	5463.	5143.	4927.
10 SANITATION COMPENSATION	2316.	2712.	2710.	2647.
11 SANITATION STRUCTURES	371.	621.	442.	335.
12 SANITATION OTHER	377.	309.	319.	305.
13 CIVILIAN SAFETY COMPENSATION	17457.	16816.	16804.	16412.
14 CIVILIAN SAFETY STRUCTURES	201.	143.	102.	77.
15 CIVILIAN SAFETY OTHER	801.	720.	678.	649.
16 HIGHWAY COMPENSATION	2253.	2170.	2178.	2118.
17 HIGHWAY STRUCTURES	2144.	1528.	1089.	874.
18 HIGHWAY OTHER	2923.	2625.	2472.	2363.
19 ALL OTHER S & L COMPENSATION	20132.	19393.	19379.	18926.
20 ALL OTHER S & L STRUCTURES	1977.	1408.	1004.	760.
21 ALL OTHER S & L OTHER	6789.	6059.	5741.	5499.
TOTAL -- STATE & LOCAL GOVERNMENT	175000.	165000.	162000.	157000.

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FEDERAL EMERGENCY MANAGEMENT AGENCY -- NATIONAL RESOURCES DIVISION (NF-RP-NR)
1984 STOCKPILE COMMODITY -- NON SCENARIO LAR3 (LAD3)
TIER DEFINITIONS FOR
PERSONAL CONSUMPTION EXPENDITURES

	DEFENSE TIER	ESSENTIAL CIVILIAN TIER	RADIO INDUSTRIAL TIER	TOTAL
1 NEW CARS (65)		1.00		1.00
2 USED CARS (66)		1.00		1.00
3 OTHER MOTOR VEHICLES (67)		1.00		1.00
4 PARTS & ACCESSORIES (68)		1.00		1.00
5 FURNITURE, INCL. MATTRESSES (29)		1.00		1.00
6 KITCHEN & OTHER APPLIANCES (30)		1.00		1.00
7 CHINA, TABLEWARE & UTENSILS (31)		1.00		1.00
8 RADIO, TV, RECORDS & MUSIC INSTRUL (87)		1.00		1.00
9 OTHER DURABLE HOUSE FURNISHINGS (32)		1.00		1.00
10 JEWELRY & WATCHES (18)		1.00		1.00
11 ORTHOPAEDIC & ORTHOPAEDIC GOODS (46)		1.00		1.00
12 BOOKS & MAPS (83)		1.00		1.00
13 WHEEL GOODS, TOYS, SPORTS EQUIP. (86)		1.00		1.00
14 FOOD PURCH. FOR OFF-PREMISES (3)		1.00		1.00
15 PURCHASED MEALS (4)		1.00		1.00
16 FOOD FURNISHED EMP'L'S INCL. MILITARY (5)		1.00		1.00
17 FOOD PRODUCED & CONSUMED ON FARMS (6)		1.00		1.00
18 SHOES & OTHER FOOTWEAR (12)		1.00		1.00
19 WOMEN'S & CHILDREN'S CLOTHING (14)		1.00		1.00
20 MEN'S & BOYS' CLOTH'G EXC. MILITARY (15)	1.00	1.00		1.00
21 STANDARD MILITARY CLOTHING (16)				
22 GASOLINE & OIL (70)		1.00		1.00
23 FUEL OIL & COAL (40)		1.00		1.00
24 TOBACCO PRODUCTS (7)		1.00		1.00
25 TOILET ARTICLES & PREPARATIONS (21)		1.00		1.00
26 SEMI-DURABLE HOUSE FURNISHINGS (23)		1.00		1.00
27 CLEANING & POLISHING PREPARATIONS (34)		1.00		1.00
28 STATIONERY & WRITING SUPPLIES (25)		1.00		1.00
29 DRUG PREPARATIONS & SUPPLIES (45)		1.00		1.00
30 MAGAZINES, NEWSPAPERS, ETC. (64)		1.00		1.00
31 TOYS & SPORT SUPPLIES (85)		1.00		1.00
32 FLOWERS, SEEDS, & POTTED PLANTS (82)		1.00		1.00
33 H. & H. EXPENDITURES AMOUNT (105)		1.00		1.00
34 PENTHANE IN 1 LITR TO FORD JOURNAL (107)		1.00		1.00

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FORM 6-10-101 USE ONLY

FEDERAL EMERGENCY MANAGEMENT AGENCY - NATURAL RESOURCES DIVISION (NRE - 101)
1994 STATE OF CALIFORNIA - WORKS TO BE DONE (LAD-1)

ITEM DEFINITION CODE
PERSONAL EXPENDITURE EXPENDITURES

	DEPT/AGENCY	ESSENTIAL	BASIC	TOTAL
35. OWNER OCCUPIED DWELLING RENT (24)	1.00			1.00
36. UNOWNED OCCUPIED DWELLING RENT (25)	1.00			1.00
37. RENTAL VALUE OF FARM DWELLINGS (26)	1.00			1.00
38. OTHER HOUSING (27)	1.00			1.00
39. UTILITIES (37)	1.00			1.00
40. GAS (39)	1.00			1.00
41. WATER & SANITARY SERVICES (39)	1.00			1.00
42. TELEPHONE & TELEGRAPH (41)	1.00			1.00
43. DOMESTIC SERVICES (42)	1.00			1.00
44. OTHER HOUSEHOLD OPERATIONS (43)	1.00			1.00
45. AUTO REPAIR, PARKING & RENTAL (44)	1.00			1.00
46. BRIDGE, TUNNEL, FERRY, ROAD TOLLS (71)	1.00			1.00
47. RAIL - LOCAL & LONG DISTANCE (74.78)	1.00			1.00
48. AIR LINES (80)	1.00			1.00
49. OTHER (74-75, 79.81)	1.00			1.00
50. PERSONAL & REPAIR SERV. (12.17, 19.22, 88)	1.00			1.00
51. HEALTH SERVICES (47-50)	1.00			1.00
52. LEGAL SERVICES (60)	1.00			1.00
53. INSURANCE & FINANC'L SERV. (51.56-59.72)	1.00			1.00
54. FUNERAL & BURIAL EXPENSES (61)	1.00			1.00
55. OTHER PERSONAL BUSINESS SERVICES (62)	1.00			1.00
56. THEATER, SPORTS, & RACES (91-93, 96)	1.00			1.00
57. CLUBS, FRAT S. PARTIC. AMUSE. (94-95)	1.00			1.00
58. OTHER RECREATIONAL EXPENDITURES (97)	1.00			1.00
59. PRIVATE EDUC. & HIGHER EDUC. (99-100)	1.00			1.00
60. OTHER PRIVATE EDUC. & RESEARCH (101)	1.00			1.00
61. RELIGIOUS & WELFARE ACTIVITIES (102)	1.00			1.00
62. FOREIGN TRAVEL BY U. S. RESIDENTS (104)	1.00			1.00
63. EXPENDITURES BY FOREIGNERS (106)	1.00			1.00
TOTAL NUMBER OF CATEGORIES IN TIER -----	1.00	63.00		63.00

FORM 6-10-101 USE ONLY

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FEDERAL EMERGENCY MANAGEMENT AGENCY -- NATIONAL RESOURCES DIVISION (NP 60-NR)
1984 STOCKPILE GOALS STUDY -- HAS OF NAD3 (LAD3)
TIER DEFINITION FOR INVESTMENT

	DEFENSE TIER	ESSENTIAL TIER	CIVILIAN TIER	BASIC INDUSTRIAL TIER	TOTAL
1 ENGINES & TURBINES (5)				1.00	1.00
2 TRACTORS (6)				1.00	1.00
3 AGRICULTURE MACHINERY EXC. TRACTORS (7)				1.00	1.00
4 CONSTRUCTION MACHINERY EXC. TRACTORS (8)				1.00	1.00
5 MINING & OILFIELD MACHINERY (9)				1.00	1.00
6 METAL-WORKING MACHINERY (10)				1.00	1.00
7 SPECIAL INDUSTRY MACHINERY (11)				1.00	1.00
8 GENERAL INDUSTRY MACHINERY (12)				1.00	1.00
9 OFFICE, COMPUT'G & ACCOUNT'G MACH. (13)				1.00	1.00
10 SERVICE INDUSTRY MACHINERY (14)				1.00	1.00
11 TRANSM., DISTRIB. & INDUS. APPAR. (16)				1.00	1.00
12 COMMUNICATIONS EQUIPMENT (17)				1.00	1.00
13 ELECTRICAL EQUIPMENT NEC (18)				1.00	1.00
14 TRUCKS, BUSES, & TRUCK TRAILERS (19)				1.00	1.00
15 PASSENGER CARS (20)				1.00	1.00
16 AIRCRAFT (21)				1.00	1.00
17 SHIPS & BOATS (22)				1.00	1.00
18 RAILROAD EQUIPMENT (23)				1.00	1.00
19 FURNITURE & FIXTURES (3)				1.00	1.00
20 FABRICATED METAL PRODUCTS (4)				1.00	1.00
21 INSTRUMENTS (24)				1.00	1.00
22 MISCELLANEOUS EQUIPMENT (25)				1.00	1.00
23 SCRAP (26)				1.00	1.00
24 RESIDENTIAL PDE (27)				1.00	1.00
25 SINGLE & 2-4 UNIT HOUS'G (30, PT. 31, 36)		1.00			1.00
26 MULTI-UNIT (5 OR MORE) HOUSING (PT. 31)		1.00			1.00
27 MOBILE HOMES (32)		1.00			1.00
28 ALTERATIONS & ADDITIONS (33, 37)		1.00			1.00
29 NON-INDUSTRIAL UNITS (34)		1.00			1.00
30 RESIDENTIAL REAL ESTATE COMMISSION (38)		1.00			1.00
31 NET PURCHASES OF USED STRUCTURES (39)		1.00			1.00
32 INDUSTRIAL (6)				1.00	1.00
33 OFFICE BUILDINGS (PT. 7)				1.00	1.00
34 WORKSHOPS, SERV. STA. & OTH. COMM. (PT. 7)				1.00	1.00

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DATE 05/29/84, PAGE 4

FEDERAL EMPLOYMENT MONITORING AGENCY - NATIONAL RESOURCES DIVISION (NP-RD-NR)
 1980 STOCKPILE COMPARISON - MONITORING 1983 (LADP)
 TIER CATEGORIES FOR
 INVESTMENT

	DEFENSE TIER	ESSENTIAL CIVILIAN TIER	BASIC INDUSTRIAL TIER	TOTAL
35 HOSPITALS & INSTITUTIONS (10)			1.00	1.00
36 MISCELL. NON-RESID. BLDGS (8-9, 11, 13)			1.00	1.00
37 RAILROADS (13)			1.00	1.00
38 TELEPHONE & TELEGRAPH CONSTRUCTION (14)			1.00	1.00
39 ELECTRIC LIGHT & POWER CONSTRUCTION (15)			1.00	1.00
40 GAS UTILITY CONSTRUCTION (16)			1.00	1.00
41 PETROLEUM PIPELINES (17)			1.00	1.00
42 PETROLEUM & NATURAL GAS EXPLOR. (20)			1.00	1.00
43 MIN. NON-BLDG. CONSTR. & EXPLOR. (21-22)			1.00	1.00
44 NON RES. REAL ESTATE CONSTRUCTION (23)			1.00	1.00
45 NET PURCHASES OF USED STRUCTURES (24)			1.00	1.00
TOTAL NUMBER OF CATEGORIES IN TIER -	7.00	39.00	45.00	

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FEDERAL EMERGENCY MANAGEMENT AGENCY - NATIONAL RESOURCES DIVISION (OF-EP-NR)
 1974 STOCKPILE QUANTITIES STUDY - WAR SCENARIO LAD3 (CLASS)
 TIER IDENTIFIERS FOR
 INVENTORY CHANGE

	DEFENSE TIER	ESSENTIAL CIVILIAN TIER	PASIC INDUSTRIAL TIER	TOTAL
1 TOTAL FARM		1.00		1.00
2 STONE, CLAY & GLASS PRODUCTS		1.00		1.00
3 STEEL MILL PRODUCTS		1.00		1.00
4 NONFERROUS METAL PRODUCTS		1.00		1.00
5 FERRUGINOUS METAL PRODUCTS		1.00		1.00
6 MACHINERY EXC. ELECTRICAL		1.00		1.00
7 HOUSEHOLD APPL. INCL. RADIO & TV		1.00		1.00
8 ALL OTHER ELECTRICAL		1.00		1.00
9 MOTOR VEHICLES & EQUIP.		1.00		1.00
10 AIRCRAFT & PARTS		1.00		1.00
11 OTHER TRANSPORT. EQUIP.		1.00		1.00
12 INSTRUM., PHOTO. & PRODUCTS		1.00		1.00
13 OTHER MFGD. DURABLES		1.00		1.00
14 FOOD & KINDRED PRODUCTS		1.00		1.00
15 TOBACCO		1.00		1.00
16 TEXTILE MILL PRODUCTS		1.00		1.00
17 PAPER & ALLIED PRODUCTS		1.00		1.00
18 CHEMICALS PRODUCTS		1.00		1.00
19 PETROLEUM PRODUCTS		1.00		1.00
20 RUBBER & PLASTIC PRODUCTS		1.00		1.00
21 OTHER MFGD. NONDURABLES		1.00		1.00
22 MOTOR VEHICLES & EQUIPMENT		1.00		1.00
23 ELECTRICAL GOODS		1.00		1.00
24 FURNITURE, PLUMBING, ETC.		1.00		1.00
25 MACHINERY, EQUIPMENT, & SUPPLIES		1.00		1.00
26 METALS, EXCEPT SCRAP		1.00		1.00
27 OTHER MERCHANT DURABLE WHOLESALE		1.00		1.00
28 NON-MERCHANT DURABLE WHOLESALE		1.00		1.00
29 GROCERIES & RELATED PRODUCTS		1.00		1.00
30 FURNITURE, ETC.		1.00		1.00
31 DRUGS, CHEMICALS, CLEANING SUPPLIES		1.00		1.00
32 FARM PRODUCTS		1.00		1.00
33 FARM PRODUCTS		1.00		1.00
34 FARM PRODUCTS		1.00		1.00
35 OTHER MERCHANT NONMERCHANT WHOLESALE		1.00		1.00
36 NON-MERCHANT DURABLE WHOLESALE		1.00		1.00

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FEDERAL AGENCY MANAGEMENT AGENCY - NATIONAL RESOURCES DIVISION (NP-RP-NR)
1994 SPECIAL AGONY - MONITORING LOG (LAD3)
TIER DEFINITIONS FOR
INVENTORY CHANGE

	DEFINITION	ED FNTIN	BASIC	TOTAL
	TIER	CIVILIAN	INDUSTRIAL	
		TIER	TIER	
37 FURNITURE & APPLIANCES		1.00		1.00
38 LUMBER, HARDWARE, FARM EQUIP		1.00		1.00
39 AUTOS, PARTS, TIRES & ACCESS		1.00		1.00
40 OTHER DURABLE GOODS RETAIL		1.00		1.00
41 FOOD STORES		1.00		1.00
42 DEPARTMENT STORES		1.00		1.00
43 APPAREL		1.00		1.00
44 GENERAL MERCHANDISE & MAIL ORDER		1.00		1.00
45 OTHER NONDURABLE GOODS RETAILERS		1.00		1.00
46 OTHER DURABLE GOODS INVENTORIES		1.00		1.00
47 OTHER NONDURABLE GOODS INVENTORIES		1.00		1.00
TOTAL NUMBER OF CATEGORIES IN TIER		47.00		47.00

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FEDERAL EMERGENCY MANAGEMENT AGENCY - NATIONAL RESOURCES DIVISION (NP-RD-NR)
1984 STOCKPILE GOALS STUDY - WAR SCENARIO LADS (LADS)
TIER DEFINITIONS FOR EXPORTS

	HAZARDOUS TIER	ESSENTIAL CIVILIAN TIER	INDUSTRIAL TIER	TOTAL
1 UNMILLED GRAINS (041.042.1.043-45)		1.00		1.00
2 FRUITS & VEGETABLES (05)		1.00		1.00
3 FEED, MILLED PRODUCTS (08,042.2.046-48)		1.00		1.00
4 OTHER FOOD PRODUCTS & LIVE ANIMALS		1.00		1.00
5 BEVERAGES (11)		1.00		1.00
6 TOBACCO & TOBACCO MFRS. (12)		1.00		1.00
7 HIDES, SKINS, FUR3-UNDRESSED (21)		1.00		1.00
8 OIL SEEDS, NUTS, & FLOUR THEREOF (22)		1.00		1.00
9 RUBBER, CRUDE INCL. SYNTHETIC (23)		1.00		1.00
10 WOOD, LUMBER, AND CORK (24)		1.00		1.00
11 PULP, AND WASTE PAPER (25)		1.00		1.00
12 TEXT, FIBERS EXC. COT. (26 EXC. 263.1)		1.00		1.00
13 RAW COTTON EXC. LINTERS (263.1)		1.00		1.00
14 CRUDE FERTILIZERS & MINERALS (27)		1.00		1.00
15 METAL SCRAP (282.288)		1.00		1.00
16 METAL ORES & CONCENTR. (281.289.235-86)		1.00		1.00
17 ANIMAL & VEGETABLE MATERIALS (29)		1.00		1.00
18 COKE, COAL & BRIQUETS (32)		1.00		1.00
19 PETROLEUM & GAS (33,34)		1.00		1.00
20 FATS & OILS (SECT. 41 41-43)		1.00		1.00
21 CHEMICAL ELEMENTS, FERTIL., ETC. (51.56)		1.00		1.00
22 MEDICINALS & PHARMACEUTICAL PROD. (54)		1.00		1.00
23 PLASTIC MAT'L3, RESINS, ETC. (50)		1.00		1.00
24 CHEM. PROD., MAT'L3 NEC (52-53,55,57,59)		1.00		1.00
25 LEATHER, DRESSED FURSKINS (61)		1.00		1.00
26 RUBBER MFRS. NEC (62)		1.00		1.00
27 WOOD & CORK MFRS. NEC (63)		1.00		1.00
28 PAPER & MFRS. (64)		1.00		1.00
29 TEXTILE YARN FABRICS & PRODM. (65)		1.00		1.00
30 NONMETALLIC MINERAL MFRS. NEC (66)		1.00		1.00
31 IRON & STEEL (67)		1.00		1.00
32 NONFERROUS METALS (68)		1.00		1.00
33 METAL MFRS. NEC (69)		1.00		1.00

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FEDERAL EMERGENCY MANAGEMENT AGENCY - NATURAL RESOURCES DIVISION (NFD-100)
1984 STOCKPILE COMMODITY SURVEILLANCE AND TIER DEFINITIONS FOR EXPORTS

	DEFENSE TIER	ESSENTIAL CIVILIAN TIER	BASIC INDUSTRIAL TIER	TOTAL
AIRCRAFT & PARTS (792)				1.00
MOTOR VEHICLES & PARTS (791-84,785.1)				1.00
OTH. TR. EQ. (791.3-31785-86 LESS 785.1)				1.00
ENGINES & TURBINES (71)				1.00
AGRICULTURAL MACH'Y & PARTS (721-22)				1.00
OFFICE MACHINES & PARTS (73)				1.00
SPECIAL INDUSTRY MACHINERY (723.725-24)				1.00
OTH. MACHINERY & PARTS NEC (724.73.74)				1.00
OTH. MACHINERY & EQUIP. (771-73)				1.00
EL. POWER MACH'Y & EQUIP. (76)				1.00
TELECOMMUNICATIONS APPARATUS (775)				1.00
ELECTRIC HOUSEHOLD APPLIANCES (776)				1.00
EL. MACH'Y & APPAR. NEC (774.776.778)				1.00
HEATING, FURNITURE, CLOTHING (81-83)				1.00
INSTA.. OPT. GOODS, MATCHES (87.894-93)				1.00
FINISH EQUIP. & SUPPL. (88 LESS 884-93)				1.00
OTHER MISC. MANU. ARTICLES NEC (89)	1.00			1.00
MILITARY ARMS & APPAREL (93)				1.00
OTHER TRANSACTIONS NEC (93-94, 96-97, 99)				1.00
RE-EXPORTS				1.00
NET MILITARY GRANTS & SALES				1.00
NET MILITARY GRANTS				1.00
NET MILITARY SALES				1.00
NET MILITARY ADJUSTMENTS				1.00
TRANSPORTATION				1.00
TRAVEL, INVEST. INCOME, & GOV'T SERVICES				1.00
FEES, ROYALTIES, & OTHER PVT. SERVICES				1.00
TOTAL NUMBER OF CATEGORIES IN TIER	2.00	93.00		95.00

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FEDERAL AGENCY MANAGEMENT SYSTEM -- NATIONAL RESOURCES DIVISION (NP-RD-PIN)
1984 STUDY -- WAGE SCENARIOS (LARD) (LARD)
TIER DEFINITIONS FOR
INDUSTRIES

	LEATHER TIER	ESSENTIAL CIVILIAN TIER	BASIC INDUSTRIAL TIER	TOTAL
1 FOOD & LIVE ANIMALS		1.00		1.00
2 BEVERAGES (11)		1.00		1.00
3 TOBACCO & TOBACCO MANUFACTURES (12)		1.00		1.00
4 HIDES, FURSKINS, OIL SEEDS, NUTS (21-22)		1.00		1.00
5 RUBBER, CRUDE INCL. SYNTHETIC (23)		1.00		1.00
6 WOOD, LUMBER, CORK (24)		1.00		1.00
7 PULP & WASTE PAPER (25)		1.00		1.00
8 TEXTILE FIBERS NOT MFRD. INTO YARN (26)		1.00		1.00
9 CRUDE FERTILIZERS & MINERALS (27)		1.00		1.00
10 IRON ORES & SCRAP (281-82)		1.00		1.00
11 NONFERROUS ORES & CONCENTRATES (286-89)		1.00		1.00
12 ANIMAL & VEGETABLE MAT'L'S NEC (29)		1.00		1.00
13 COAL, COKE, & BRIQUETS (32)		1.00		1.00
14 CRUDE PETROLEUM (333)		1.00		1.00
15 PETROLEUM PRODUCTS (334-35)		1.00		1.00
16 GAS, NATURAL & MANUFACTURED (34)		1.00		1.00
17 OIL & FATS, ANIMAL & VEGETABLE (4)		1.00		1.00
18 CHEMICALS (51-59 EXC. 54, 58)		1.00		1.00
19 MEDICINAL & PHARM. PRODUCTS (54)		1.00		1.00
20 SYNTHETIC & PLASTIC MATERIALS (58)		1.00		1.00
21 LEATHER & LEATHER WFRS. NEC (61)		1.00		1.00
22 RUBBER WFRS. -- FINISHED NEC (62)		1.00		1.00
23 WOOD & CORK MANUFACTURES NEC (63)		1.00		1.00
24 PAPER & WFRS. THEREOF (64)		1.00		1.00
25 TEXTILE YARN, FABRICS & PROD. (65)		1.00		1.00
26 GLASS & GLASSWARE (664-65)		1.00		1.00
27 NONMET. WFRS. EXC. GLASS (66 EXC. 664-65)		1.00		1.00
28 IRON & STEEL (67)		1.00		1.00
29 COPPER METAL (682)		1.00		1.00
30 ALUMINUM METAL (684)		1.00		1.00
31 LEAD METAL (685)		1.00		1.00
32 ZINC METAL (686)		1.00		1.00
33 OTHER NONFER. METAL (69 EXC. 694-96)		1.00		1.00
34 METAL MANUFACTURES NEC (69)		1.00		1.00
35 NONM. EXC. FL. (71 LESS 716, 74 LESS 747)		1.00		1.00

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FEDERAL EMERGENCY MANAGEMENT AGENCY - NATIONAL DEFENSE DIVISION (NF-PP-PR)
1984 STUDY - WAF SCENARIO (LAD) (LAD)
TIER DEFINITIONS FOR
IMPORTS

IMPORTS	DEFENSE	ESSENTIAL	BASIC	TOTAL
36 AGRICULTURAL MACH'Y & PARTS (721, 722.4)	1.00			1.00
37 OFFICE MACHINES & PARTS (73)	1.00			1.00
38 METALWORKING MACHINERY (73)	1.00			1.00
39 SPEC. INDUS. MACH'Y (72 LESS 721, 722.4)	1.00			1.00
40 SFFC. INDUS. MACH'Y (716, 771-73)	1.00			1.00
41 ELEC. PUR. & DISTR. EQUIP. (716, 771-73)	1.00			1.00
42 TELECOMMUNICATIONS APPAR. & PARTS (76)	1.00			1.00
43 ELEC. HOUSEHOLD APPLIANCES (747, 775)	1.00			1.00
44 MEDICAL APPL. & PARTS NEC (774, 776, 778)	1.00			1.00
45 MEDICAL APPL. & PARTS (791, 793, 799)	1.00			1.00
46 RAIL, SHIPS, BOATS (791, 793, 799)	1.00			1.00
47 ROAD MOTOR VEHICLES & PARTS NEC (78)	1.00			1.00
48 AIRCRAFT, SPACECRAFT & PARTS (792)	1.00			1.00
49 PLUMB'G, HEAT'G & LIGHT'G FIXTURES (81)	1.00			1.00
50 FURNITURE (92)	1.00			1.00
51 TRAVEL & OTHER PERSONAL GOODS (83)	1.00			1.00
52 CLOTHING EXCL. FOOTWEAR (84)	1.00			1.00
53 FOOTWEAR EXCL. ORTHOPEDIC (85)	1.00			1.00
54 SCIENTIFIC INSTRUMENTS (87)	1.00			1.00
55 PHOTO APPAR., OPTICAL GOODS, WATCHES (88)	1.00			1.00
56 PRINTED MATTER (89)	1.00			1.00
57 RUBBER & PLASTIC WFRS. NEC (90)	1.00			1.00
58 BABY STROLLERS, WHEELCHAIRS (924)	1.00			1.00
59 OFFICE & STATIONERY SUPPLIES NEC (895)	1.00			1.00
60 JEWELRY, CANDLES, ETC. NEC (896-99)	1.00			1.00
61 SPECIAL TRANSACTIONS NEC (93)	1.00			1.00
62 ANHS. ANIMALS NEC. GOLD, ETC. (9 EXC. 93)	1.00			1.00
63 IMP ADJ. TO CENSUS - VIRGIN ISLANDS	1.00			1.00
64 IMP ADJ. TO CENSUS - GOLD	1.00			1.00
65 IMP ADJ. TO CENSUS - ELECTRIC ENERGY	1.00			1.00
66 IMP ADJ. TO CENSUS - OTHER (91)	1.00			1.00
67 EST. ALL. FOR FOOD & FETTERING	1.00			1.00
68 EST. TRANSPORTATION SERVICES	1.00			1.00
69 EST. BTE FOREIGN TRAVEL	1.00			1.00
70 EST. INSURANCE SERVICES	1.00			1.00
71 OTHER (RESIDUAL VALUE)	1.00			1.00
TOTAL NUMBER OF CATEGORIES IN TIER	69.00			69.00

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FEDERAL EMERGENCY MANAGEMENT AGENCY NATIONAL RESOURCES DIVISION (NO RDP-180)
1980 STOCKPILE COMPARISON - NATIONAL STOCKPILE (1980)
TIER INFORMATION FOR
FEDERAL GOVERNMENT

	DEFENSE TIER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	TOTAL
1 NON DEFENSE COMPENSATION																														
2 NON DEFENSE STRUCTURES																														
3 NON DEFENSE RESEARCH & DEVELOPMENT																														
4 NON DEFENSE RESEARCH & DEVELOPMENT																														
5 NON DEFENSE RESEARCH & DEVELOPMENT																														
6 NON DEFENSE RESEARCH & DEVELOPMENT																														
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27 NON DEFENSE RESEARCH & DEVELOPMENT																														
28 NON DEFENSE RESEARCH & DEVELOPMENT																														
TOTAL NUMBER OF CATEGORIES IN TIER																														

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FEDERAL ENERGY MANAGEMENT DIVISION
1984 CONSUMPTION STUDY -- WASHINGTON FIELD (LAD-1)
NON-ESSENTIAL PERSONAL CONSUMPTION EXPENDITURES IN MILLIONS OF 1972

	1984	1985	1986
1 NEW CARS (45)	200.	200.	200.
2 USED CARS (66)	6300.	6400.	6900.
3 OTHER MOTOR VEHICLES (47)	7000.	7100.	7700.
5 FURNITURE, INCL. MATTRESSES (29)	9400.	9600.	10400.
6 KITCHEN & OTHER APPLIANCES (30)	8400.	8500.	9200.
7 CHINA, TABLEWARE & UTENSILS (31)	3700.	3800.	4100.
8 RADIO, TV, RECORDS & MUSIC INSTR. (37)	13400.	13700.	20300.
9 OTHER DURABLE HOUSE FURNISHINGS (32)	10000.	10200.	11000.
10 JEWELRY & WATCHES (18)	5900.	6000.	6500.
12 BOOKS & MAPS (83)	3000.	3100.	3300.
13 WHEEL GOODS, TOYS, SPORTS EQUIP. (86)	8500.	8500.	9200.
44 OTHER HOUSEHOLD OPERATIONS (43)	1000.	1000.	1000.
TOTAL PCE	81800.	83100.	89300.

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FEDERAL EMERGENCY MANAGEMENT AGENCY -- NATURAL RESOURCES DIVISION (NP-RP-NR)
 1984 STOCKPILE GOALS STUDY -- WAR SCENARIO LAD3 (LAD3)
 NONESSENTIAL FIXED INVESTMENT IN MILLIONS OF 1972 DOLLARS

	1984	1985	1986
1 ENGINES & TURBINES (5)	700.	751.	731.
2 TRACTORS (6)	500.	537.	522.
3 AGRICULTURE MACHINERY EXC. TRACTORS (7)	1200.	1288.	1253.
7 SPECIAL INDUSTRY MACHINERY (11)	1500.	1610.	1566.
8 GENERAL INDUSTRY MACHINERY (12)	2000.	2147.	2088.
9 OFFICE, COMPUT'G & ACCOUNT'G MACH. (13)	28400.	30488.	29653.
10 SERVICE INDUSTRY MACHINERY (14)	2500.	2684.	2610.
11 TRANSM., DISTRIB. & INDUS. APPAR. (16)	3000.	3221.	3132.
12 COMMUNICATIONS EQUIPMENT (17)	7000.	7515.	7309.
13 ELECTRICAL EQUIPMENT NEC (18)	1500.	1610.	1566.
14 TRUCKS, BUSES, & TRUCK TRAILERS (19)	1000.	1074.	1044.
15 PASSENGER CARS (20)	11000.	11809.	11485.
16 AIRCRAFT (21)	500.	537.	522.
17 SHIPS & BOATS (22)	700.	751.	731.
19 FURNITURE & FIXTURES (3)	3500.	3757.	3654.
20 FABRICATED METAL PRODUCTS (4)	1000.	1074.	1044.
21 INSTRUMENTS (24)	1000.	1074.	1044.
22 MISCELLANEOUS EQUIPMENT (25)	1000.	1074.	1044.
32 INDUSTRIAL (6)	8000.	8516.	8516.
33 OFFICE BUILDINGS (PT.7)	15000.	15968.	15968.
35 HOSPITALS & INSTITUTIONS (10)	2600.	2768.	2768.
38 TELEPHONE & TELEGRAPH CONSTRUCTION (14)	2700.	2874.	2874.
39 ELECTRIC LIGHT & POWER CONSTRUCTION (15)	2000.	2129.	2129.
43 OTH. NON-BLDG. CONSTR. & EXPLOR. (21-22)	700.	745.	745.
TOTAL FIXED INVESTMENT -----	99000.	106001.	103998.

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FEDERAL EMERGENCY MANAGEMENT AGENCY - NATURAL AL BUREAU'S DIVISION (NF-RF-NR)
1984 STOCKPILE GOALS STUDY -- WAR SCENARIO LAD3 (LAD3)
NONESSENTIAL INVENTORY CHANGE IN MILLIONS OF 1972 DOLLARS

	1984	1985	1986	
	:	:	:	
	:	:	:	
1 TOTAL FARM	2000.	2000.	2000.	
2 STONE, CLAY & GLASS PRODUCTS	1000.	0.	0.	
3 STEEL MILL PRODUCTS	0.	1000.	0.	
5 FABRICATED METAL PRODUCTS	0.	400.	400.	
7 HOUSEHOLD APPL. INCL. RADIO & TV	1000.	1500.	1500.	
8 ALL OTHER ELECTRICAL	0.	500.	300.	
9 MOTOR VEHICLES & EQUIP.	0.	300.	300.	
11 OTHER TRANSPORT. EQUIP.	500.	500.	500.	
13 OTHER MFGD. DURABLES	0.	500.	500.	
14 FOOD & KINDRED PRODUCTS	2000.	3000.	2500.	
15 TOBACCO	200.	400.	300.	
16 TEXTILE MILL PRODUCTS	200.	500.	500.	
17 PAPER & ALLIED PRODUCTS	200.	300.	300.	
18 CHEMICALS PRODUCTS	0.	200.	200.	
20 RUBBER & PLASTIC PRODUCTS	0.	300.	200.	
21 OTHER MFGD. NONDURABLES	1500.	2000.	1500.	
22 MOTOR VEHICLES & EQUIPMENT	700.	1400.	1000.	
23 ELECTRICAL GOODS	400.	1300.	900.	
24 HARDWARE, PLUMBING, ETC.	300.	500.	400.	
25 MACHINERY, EQUIPMENT, & SUPPLIES	300.	700.	400.	
26 METALS, EXCEPT SCRAP	100.	400.	100.	
29 GROCERIES & RELATED PRODUCTS	200.	400.	400.	
30 LIQUOR, BEER, ETC.	0.	100.	100.	
33 FARM PRODUCTS	200.	200.	300.	
35 OTHER MERCHANT NONDURABLE WHOLESALERS	100.	200.	100.	
36 NON-MERCHANT NONDURABLE WHOLESALERS	100.	200.	100.	
37 FURNITURE & APPLIANCES	300.	1500.	900.	
38 LUMBER, HARDWARE, FARM EQUIPMENT	300.	600.	200.	
39 AUTOS, PARTS, TIRES & ACCESSORIES	900.	1500.	700.	
40 OTHER DURABLE GOODS RETAILERS	200.	500.	200.	
41 FOOD STORES	400.	700.	500.	
42 DEPARTMENT STORES	400.	1100.	600.	
43 APPAREL	500.	900.	600.	
44 GENERAL MERCHANDISE & MAIL ORDER	300.	200.	200.	

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FEDERAL EMERGENCY MANAGEMENT AGENCY NATURAL RESOURCES DIVISION (NP-RP-NR)
 1984 STOCKPILE GOALS STUDY -- WAR SCENARIO LAD3 (LAD3)
 NONESSENTIAL INVENTORY CHANGE IN MILLIONS OF 1972 DOLLARS

	1984	1985	1986
45 OTHER NONDURABLE GOODS RETAILERS	500.	500.	500.
46 OTHER DURABLE GOODS INVENTORIES	300.	400.	400.
47 OTHER NONDURABLE GOODS INVENTORIES	300.	300.	400.
TOTAL INVENTORY CHANGE -----	16000.	27000.	20000.

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